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ABSTRACT

Research literature concerning the effects of incorporating the heritage languages of minority students into the regular school curriculum either as subjects or as mediums of instruction is reviewed. Program evaluations from Canada, the United States, and Europe consistently show that the use of a minority language as a medium of instruction for all or part of the school day entails no long-term loss in the development of academic skills in the majority language. There is also evidence that bilingual programs can both encourage minority parent involvement in their children's schooling and facilitate the development of minority students' academic skills. However, this pattern does not invariably emerge in the evaluation data, and further research is required to understand fully the complex interactions that appear to exist between language of instruction and a range of individual, educational, and social factors. Virtually no research data are available on the academic effects of teaching heritage languages as subjects, as opposed to using the languages as a medium of instruction. Also, because most program evaluations focus primarily on academic outcomes, little or no data are available on the impact of bilingual or heritage language programs on the educational system as a whole. Three major policy implications of the research are addressed. (Author/SW)

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HERITAGE LANGUAGE EDUCATION

A Literature Review

JIM CUMMINS, Principal Investigator

U.S. DEPARTMENT OF EDUCATION
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Because of the relative recency of widespread educational concern in North America and Europe for both the promotion of minority language skills and the academic development of minority language students, the findings of many research investigations into these phenomena are available only in mimeographed form and circulated on a relatively limited basis. To colleagues in Australia, Canada, Europe, and the United States who greatly facilitated my task by providing me with as yet unpublished research reports or who brought published material to my attention, I express a heartfelt thanks.

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Abstract

This literature review examines the effects of incorporating the heritage languages of minority students into the regular school curriculum either as subjects or as mediums of instruction.

Program evaluations from Canada, the United States, and Europe consistently show that the use of a minority language as a medium of instruction for all or part of the school day entails no long-term loss in the development of academic skills in the majority language. There is also evidence that bilingual programs can both encourage minority parent involvement in their children's schooling and facilitate the development of minority students' academic skills. However, this pattern does not invariably emerge in the evaluation data, and further research is required to understand fully the complex interactions that appear to exist between language of instruction and a range of individual, educational, and social factors.

Virtually no research data are available on the academic effects of teaching heritage languages as subjects, as opposed to using the languages as a medium of instruction. Also, because most program evaluations focus primarily on academic outcomes, little or no data are available on the impact of bilingual or heritage language programs on the educational system as a whole.

The major policy implications of the research are as follows:

1. There are no educational impediments to the implementation of bilingual heritage language programs for ethnocultural minority students, for either enrichment or transitional purposes.

2. Bilingual programs appear to have potential for facilitating the educational development of minority students who are academically at risk.

3. Further research is required to assess the nature of the academic needs of minority students, the extent to which these needs are currently being addressed by both the Heritage Languages Program and the regular English curriculum, the potential effectiveness of alternative program options in meeting specific academic needs of minority students, the implications of Bill 82 in regard to assessment and placement of minority students, and the possibility of utilizing more effectively the linguistic and cultural expertise of heritage language instructors in assessing minority students' academic potential.

I Introduction

PURPOSE AND SCOPE

The purpose of this study is to review the available research data regarding the effects of incorporating the heritage languages of minority students into the regular school curriculum either as a subject or as a medium of instruction.

Several broad categories of such programs have been distinguished (see, e.g., Fishman, 1976; Mackey, 1971). For present purposes, however, it is sufficient to distinguish between "transitional" and "enrichment" programs. Transitional programs involve the use of children's home language as a temporary bridge to help them keep up with academic content while they are acquiring proficiency in the regular school language. Enrichment programs (Fishman, 1976), on the other hand, involve the use of the minority language on a longer-term basis in order to develop bilingual skills. Whereas transitional programs are usually intended only for students from minority language backgrounds, enrichment programs may involve students from both minority and majority backgrounds. The term "enrichment program" also encompasses a wide variety of program types; for example, the Ontario Heritage Languages Program, French-language schools for minority Francophone students, and French immersion programs all qualify as enrichment programs in that they all use the minority language on a long-term basis in order to help students develop proficiency in two languages. The term "enrichment program" is preferable in the present context to "maintenance program", since the latter term is narrower and is not appropriate to describe heritage language programs designed to help students to acquire the language or to expand the range of their language skills.

The scope of the present review extends to bilingual or heritage language programs intended primarily for students from minority ethnocultural backgrounds. Thus, the Ukrainian-English bilingual programs in western Canada and the trilingual Hebrew-French-English programs in Montreal and some other Canadian cities are included in the review, although the majority of students in these programs are not fluent in the ethnic language on entry to the program. French immersion programs are not included because they are intended primarily (but certainly not exclusively) for students from English-speaking home backgrounds.

A variety of terms have been used to refer to minority students' home languages and to school programs that teach those languages. For example, among the most common terms for the minority language are the following: first language (L1), mother tongue, heritage language, ancestral language, ethnic language, third language, non-official language, etc. Because of the international scope of the present review, the most inclusive terms are generally used. Thus, the term "minority language program" is used to include both "bilingual programs" where the minority language is used as a medium of instruction and "heritage language programs" where the minority language is taught as a subject of instruction. The term "first language" (abbreviated as L1) is used when the minority language is, in fact, the child's first-learned language (although in bilingual homes it is not always possible to distinguish which is the first-learned), while the term "heritage language" generally refers to the community ethnocultural language which is not necessarily the child's first-learned language (or even used in the home).

The review focuses on the experience of educators in Canada, the United States, and Europe, although occasionally other data are discussed in order to illustrate the generalizability of particular points. Most of the research has focused on the effects of particular programs on the individual student, and consequently the review deals most extensively with this issue; however, data relevant to the effects of programs on community groups and on the educational system as a whole are also discussed.

METHODOLOGICAL CONSIDERATIONS: THE ROLE OF THEORY

All educational programs are conceived within a particular societal context which significantly affects their implementation. For example, a bilingual program that is perceived as threatening by a community or by a school staff is likely to have different results from one that is enthusiastically supported by all concerned. Similarly, an L2 immersion program may have very different results when implemented for middle-class English-background students in Canada, minority Spanish speakers in the United States, and tribal language speakers in Africa, India, or South America. Differences in language status, minority-majority group relations, student background characteristics, curriculum materials, and teacher training are all likely to influence program outcomes.

The point is that research findings, in themselves, cannot be directly generalized across contexts. This does not of course mean that research findings have no relevance outside of the specific context in which they were obtained. They can become relevant to other contexts when they are integrated into a coherent theory from which predictions about program outcomes under different conditions can be generated.

The importance of theory for the policy-making process is often not appreciated. Policy makers are interested in "getting the facts", and theoretical considerations are sometimes dismissed pejoratively as "just theory". Obviously, theories may be inadequate or invalid, but the point I wish to stress is that the policy emphasis on "getting the facts" is futile unless the "facts" can be understood or explained within the context of a theory. It is the theory rather that the individual "facts" which has policy implications, because it is the theory which allows the relevance of the "facts" in different contexts to be understood and consequently applied in the form of specific programs.

In the present context, it is clear that the results of, for example, a transitional bilingual program for Turkish and Moroccan students in Holland (Altena and Appel, 1983) or an enrichment bilingual program for Aboriginal students in Australia (Gale et al., 1981) cannot be directly generalized to the Ontario context. However, the theoretical or explanatory principles underlying the apparent success of these programs are, almost by definition, generalizable across contexts in that the validity of any theoretical principle is assessed precisely by how well it is capable of accounting for data from a wide variety of contexts. If a theory cannot account for a particular set of research findings, then it is an inadequate or incomplete theory.

In short, in reviewing research on the outcomes of minority language programs from a wide variety of contexts, our purpose is to uncover the theoretical principles that can account for the pattern of findings. It is only on the basis of these explanatory principles that predictions can be made about the probable outcomes of a variety of program models in the Ontario context.

OUTLINE OF THE REVIEW

The program evaluation results to be reviewed come from three main geographical areas, namely, Canada, the United States, and Europe. Individual program results from Australia and South Africa are also included. Program results from within each geographical area are reviewed according to whether the program goals are "transitional" or "enrichment" in nature. In order to place the research findings within a social context, recent developments in the education of minority students in Canada, the United States, and Europe are briefly reviewed at the beginning of the chapters dealing with findings from these three contexts. Finally, the extent to which the findings can be accounted for by particular explanatory principles are examined and some policy implications suggested.

II Minority Language Programs in Canada

THE POLICY CONTEXT

During the past fifteen years in Canada, as in many of the other western industrialized countries, there has been a dramatic increase in the number of students whose first language (L1) is other than that of the school. More than 50 per cent of the school population in several Metropolitan Toronto school systems does not have English as an L1 (see for example, Deosaran, Wright and Kane, 1976), while in the Vancouver school system the figure is around 40 per cent (Yeung, 1982). This rapid increase in the number of minority language students has given rise to considerable debate about how Canadian school systems should respond to the cultural and linguistic diversity of their students. Attempts to improve the teaching of English as a second language (ESL), or French as a second language (FSL) in Quebec, and to increase the sensitivity of school personnel to children's cultural backgrounds, have been relatively uncontroversial. However, issues related to the teaching of languages other than English and French within the public school system have been extremely contentious.

Federal and provincial policies of multiculturalism have been somewhat ambiguous with respect to support for the teaching of languages other than English and French, the two official languages. Policies have generally acknowledged, either explicity or implicitly, the value of Canada's linguistic resources, but issues of administrative feasibility, cost, and the primacy of French as a second language outside of Quebec have placed constraints on the levels and forms of public support considered appropriate.

The teaching of heritage languages within the public school system has been an extremely acrimonious topic of debate in some urban centres (e.g., Metropolitan Toronto) during the past decade but in other areas has been accepted with little or no controversy (e.g., Alberta and Manitoba). The differences between the Ontario and western Canadian programs with regard to size as well as type of program (add-on v. bilingual) are obvious factors here. In Toronto, advocates of the Heritage Languages Program (including, obviously, the Ontario Ministry of Education which provides funding) have seen promotion of heritage languages as academically advantagious for minority students, as a means of increasing cohesion and child-adult communication within minority families, and as a means of expanding the social and cultural horizons of all students. Opponents, on the other hand, have seen heritage language teaching as socially divisive, excessively costly, and educationally retrograde in view of minority students' need to learn English (see Masemann, 1978/79).

PRESENT PROVISION FOR THE TEACHING OF MINORITY LANGUAGES

In recent years, programs of heritage language instruction have been instituted in the public elementary school systems of several provinces. The principal aims of these programs are to promote the continued vitality of ethnic cultures and to enrich children's educational experience. In other words, unlike most bilingual programs in the United States, the majority of Canadian programs are not designed to compensate for presumed impediments to academic achievement (e.g., lack of English proficiency) which minority children bring to school.

In 1971, Alberta became the first province to legalize languages other than English or French as mediums of instruction in the public school system, largely as a result of pressure from the Ukrainian community. Currently, bilingual programs involving Ukrainian, German, and Hebrew respectively exist in several elementary schools in Edmonton. In these programs the heritage language is used as a language of instruction for 50 per cent of the school day throughout the elementary school. In 1979/80, a total of 1271 students were enrolled in these bilingual programs, the Ukrainian program being the largest with close to 800 students enrolled between Kindergarten and Grade 6 in seven Edmonton schools.

In 1979, Manitoba passed enabling legislation permitting the use of heritage languages as languages of instruction for up to 50 per cent of the school day. In 1980/81, 320 students were enrolled in the English-Ukrainian bilingual program. Saskatchewan has similar enabling legislation and an English-Ukrainian bilingual program has also been recently instituted in that province.

In Ontario it is not legal to use languages other than English and French as mediums of instruction in the public school system except on a temporary basis to help children acquire English skills. However, in 1977, the Ontario Ministry of Education instituted the Heritage Languages Program under which funding is provided to school boards for the teaching of heritage languages for up to 2½ hours per week outside of the regular 5-hour school day. In 1981/82, there were almost 82 000 students representing mor than fifty language groups enrolled in the Heritage Languages Program. This figure represents an increase of more than 25 000 students since the first year of the program.

In Quebec, until recently, English could be legally used as the language of instruction in the public school system only for children whose parents were English-speaking and who had themselves been educated in English schools in Quebec. French was the legal language of instruction for all others. This provincial law has recently (August 1982) been declared unconstitutional by the Quebec courts, but that ruling is currently under appeal. In 1978, the Programme de l'enseignement des langues d'origine (PELO) was started by the Quebec provincial government. PELO involves teaching Italian, Portuguese, Greek, and Spanish to children of these backgrounds for 30 minutes per day during regular school hours. Approximately 600 students are currently enrolled in this program.

It is clear that both the numbers of students receiving heritage language instruction in the public elementary school system and the types of programs vary widely across provinces. By contrast, there is relative uniformity of programs for minority Francophones in all Canadian provinces. The amount of French-medium instruction in these programs usually varies from between 50 and 100 per cent of the day from Kindergarten through Grade 12. For Native peoples, there has been a revival in teaching heritage languages across Canada and some bilingual programs have been started; however, none of these has been systematically evaluated. In addition to these programs operating within the public school system, there are many heritage language classes operated by the linguistic communities themselves on Saturday mornings or after school hours. These classes are eligible for financial assistance from the federal government under its Cultural Enrichment Program. During the 1979/80 fiscal year 532 grants were made under this program to forty-two linguistic community groups for a total of more than a million dollars.

There are two principal rationales for these Canadian programs: first, cultural maintenance, and second, educational enrichment. For the most part, those enrolled in the bilingual programs in western Canada are third-generation students who are not fluent in the heritage language on entry to the program. Thus, the principal aims of the programs are to revive the language and help students appreciate their cultural heritage. As in French immersion programs, however, parents view the acquisition of a second language as an educationally enriching experience, provided of course this can be achieved at no cost to students' English language skills.

The same rationales apply to the Ontario and Quebec programs, although there is a much greater proportion of first- and second-generation students in these programs than in their western Canadian counterparts. The Ontario and Quebec programs also involve what can be termed a "survival" rationale--i.e., one of the aims of incorporating L1 into the school curriculum is to help minority students "survive" educationally. It is argued that teaching heritage languages in the public school will help students overcome emotional and academic adjustment difficulties by improving their self-concept and developing some concepts through L1.

EDUCATIONAL EFFECTS OF MINORITY LANGUAGE PROGRAMS

Research has been carried out on four very different types of enrichment minority language programs in the Canadian context: (1) the Ukrainian-English bilingual programs in Alberta and Manitoba; (2) trilingual programs involving Hebrew; (3) the Ontario Heritage Languages Program; and (5) French-language programs for minority Francophone students. Several transitional programs have also been evaluated. These enrichment and transitional program evaluations are considered below.

A. ENRICHMENT PROGRAMS

1. Bilingual Programs

(a) English-Ukrainian (Edmonton Public School Board)

In September 1973, the Edmonton Public School Board (EPSB) introduced the English-Ukrainian bilingual program at the kindergarten level. In Kindergarten 100 per cent of instructional time was in Ukrainian, after which instructional time was divided equally between English and Ukrainian. Mathematics, English language arts, and science were taught in English, while social studies, physical education, Ukrainian language arts, art, and music were taught in Ukrainian.

More than three-quarters of the students came from homes in which one or both parents could speak Ukrainian and only about 10 per cent of the students had no Ukrainian ancestry. However, only about 15 per cent of the students were fluent in Ukrainian on entry to school. Unlike typical students in French immersion programs, the bilingual students were representative of the EPSB system in terms of both ability level and parental socio-economic status. For example, their Grade 1 score (averaged over five years from 1974 to 1978) on the Metropolitan Readiness Test was only one point above the EPSB mean, and less than 50 per cent of parents had post-secondary education (Edmonton Public Schools, 1980).

In the first year of the evaluation, control students were chosen from among students in regular unilingual English program classes across the EPSB system whose parents had the same socio-economic level and knowledge of Ukrainian as the program parents. In subsequent years control students were randomly chosen from the same schools as students in the bilingual program. The selection was stratified on the basis of sex, school, and ability level.

No consistent pattern of differences emerged in comparisons of English and mathematics skills between program and control students in the early grades. However, at the Grade 5 level the first cohort of bilingual program students performed significantly better than control students in mathematics and on both decoding and comprehension subtests of the standardized reading test that was administered. The evaluation was discontinued at this point so that it is impossible to say whether or not subsequent cohorts also outperformed the unilingual control group.

The evaluation carried out by the EPSB also examined the issue of whether the program was equally appropriate for students of different ability levels. This was done by dividing students into high, medium, and low ability levels and testing program-by-ability interaction effects in a two-way analysis of variance design. No evidence of interaction effects was found, indicating that low-ability students had no more difficulty in the bilingual program than they would have had in the regular program.

A study was carried out with Grade 1 and 3 students in order to investigate bilingual children's metalinguistic development. The study (Cummins and Mulcahy, 1978) revealed that students who were relatively fluent in Ukranian because their parents used it consistently in the home were significantly better able to detect ambiguities in English sentence structure than either equivalent unilingual English-speaking children not in the program or children in the program who came from predominantly English-speaking homes.

The EPSB evaluation also reported that students' Ukrainian skills developed in accord with program expectations and they also developed an appreciation for and knowledge about the Ukrainian culture. In addition, a large majority of the parents and program personnel were pleased with the program, felt the students were happy, and wished the program to be continued to higher grade levels.

(b) English-Ukrainian (Edmonton Catholic School Board)

The Edmonton Catholic School Board's (ECSB) bilingual program was instituted at the same time as the EPSB program. The program itself was similar to that in the EPSB with the exception that religious instruction in the Ukrainian Catholic Rite was carried out in the ECSB program but not in the EPSB.

As the program progressed through the grades, students were matched with comparison students from the same schools on the basis of grade, socio-economic status, sex, age, and Primary Mental Ability score, and the performance of matched groups on a variety of achievement tests was compared. The 1977/78 and 1978/79 evaluations (Ewanyshyn, 1979, 1980) will be considered here since they involve comparisons of students between Grades 1 and 5. Approximately 380 students were involved in the evaluation in each of these years.

The comparisons indicated that students in the bilingual program progressed academically at least as well as students in the regular English-only program. The 1977/78 evaluation reported seven significant group differences in achievement, six of which favoured the bilingual program students; in 1978/79 three out of four significant differences favoured the bilingual program. The most frequent group differences in achievement were on measures of comprehension and spelling. In addition, parents, teachers, and principals all showed high levels of satisfaction with the program.

(c) English-Ukrainian (Manitoba)

In September 1979, an English-Ukrainian bilingual program was implemented in one Grade 1 class in each of three school divisions in Manitoba. In subsequent years the program spread rapidly to other school divisions, with Kindergarten as the starting grade. The program was based on the Edmonton model. The evaluation is being carried out by the Manitoba Department of Education (Chapman, 1981).

The evaluation of the first two years of the program involved 262 program students in Kindergarten and Grades 1 and 2. The scores of these students were compared with those of regular program students in the same schools. Comparison of the Metropolitan Readiness Test scores of kindergarten students who subsequently entered either the bilingual or regular Grade 1 program showed no significant differences, suggesting that the students in the bilingual program are representative of the general school population.

Eighty-eight per cent of the parental respondents (N=203) reported that their child was of Ukrainian descent. Ukrainian was spoken at least half of the time in 23 per cent of the respondents' homes, while 76 per cent of the respondents' children regularly interacted with Ukrainian-speaking people. Thus, the students in the Manitoba program appear very similar in background to students in the Edmonton programs.

Comparison of students who attended regular and Ukrainian kindergartens revealed no group differences in English "readiness" skills, despite the fact that the Ukrainian kindergarten was conducted for about 70 per cent of the time in Ukrainian. Although possible pre-program differences are not controlled in these kindergarten comparisons, the acquisition of adequate English readiness skills despite no English instruction is consistent with the findings of other bilingual programs (see Cummins, 1981a).

No differences in English or subject matter achievement were found between program and comparison students at either the Grade 1 or 2 levels, despite the fact that comparison students had spent about twice as much time being taught in English.

Almost all parents and teachers felt that students had developed a greater awareness of the Ukrainian Cultural heritage as a result of the program. In addition, some parents reported that their child had become more enthusiastic about learning other languages (60 per cent) and other cultures (45 per cent). Almost all of the bilingual program teachers felt integrated with other teachers in the school (12 out of 13) and all were satisfied with their level of integration with other teachers. Also, almost all (7 out of 8) of the principals stated that they were "very satisfied" with the program.

In summary, the evaluations of these enrichment bilingual programs show that students acquire satisfactory levels of Ukrainian skills and appreciation of Ukrainian culture at no cost to achievement in English and other academic subjects. Student affective outcomes, as viewed by parents, teachers, and principals, also appear to be positive.

The bilingual programs also seem to have had a significant impact on Ukrainian communities, not only in the provinces of Alberta and Manitoba, but also in other parts of Canada. The evaluations reveal that the communities served by the programs show high levels of satisfaction and strongly support their continuation; in the case of other Ukrainian communities, the Alberta and Manitoba bilingual programs illustrate that Ukrainian skills can be effectively developed at no apparent academic cost and have thus encouraged these communities to lobby for the institution of similar programs.

The programs appear to have had relatively little overall effect on the educational systems involved. They operate in a similar fashion to many French-English bilingual or immersion programs and initially, at least, create new administrative issues to be dealt with (e.g., transportation, materials development, etc.). However, the strong positive response by teachers, principals, and school board administrators (Jim Jones, EPSB, and (Eugene Ewanyshyn, ECSB: personal communication) suggests that any administrative problems have not been major and have been overcome to the satisfaction of both parents and school personnel.

2. Trilingual Programs

(a) Montreal Hebrew-English Programs

Trilingual programs involving Hebrew exist in most of the major Canadian cities and are usually, but not always, operated outside of the regular public school system. Other isolated examples of trilingual education exist; for example, in one predominantly Italian-background school (St. Gaspar) in the Toronto Metropolitan Separate School Board (MSSB), students from Grades 5 to 8 are enrolled in the board's French-English bilingual program (starting in Grade 5) and also take Italian for half-an-hour a day during regular school hours (Feuerverger, 1982).

However, only the Montreal trilingual programs have been systematically evaluated. Because the program variations compared by Genesee and Lambert are complex, only the general pattern of findings is reported here. The complete evaluation data are available in Genesee, Tucker, and Lambert (1978a, 1978b), as well as in Genesee and Lambert (1980).

The basic design involved comparing groups of students who participated in two slightly different "early double immersion" (EDI) programs (i.e., Hebrew-French-English trilingual progams) with students who attended a more traditional Hebrew day school (most initial instruction through the medium of English and Hebrew, but with increasing amounts of French-medium instruction in the intermediate grades of elementary school). The Hebrew time allocation and curriculum was similar in all three schools. In one of the EDI schools English language arts was introduced in Grade 3, and in Grade 4 in the other school. the academic performance of students in these schools was also compared with that of students in regular French immersion and French-as-a-second-language (20-30 minutes per day of French taught as a subject) programs.

It was found at the Grade 4 and 5 levels that both EDI groups achieved as well in English as all other groups, despite considerably less time spent in English-medium instruction than the traditional Hebrew day school or French-as-a-second-language groups. No group differences were evident in mathematics, despite the fact that the EDI groups had

received all initial math instruction in French, whereas the traditional Hebrew day school students received all initial math instruction in English. The EDI students scored almost as well as the regular French immersion students on measures of French proficiency. On measures of Hebrew, the EDI students tended to score higher than students in the regular Hebrew day school despite the similarity of program and time allocation.

Genesee and Lambert (1980) conclude that programs of bi- and trilingualism are feasible and effective ways of enriching students' elementary education insofar as

> The Hebrew day schools were able (1) to achieve the goals of regular school programs with regard to native language development and academic achievement, (2) to maintain important religious, cultural and linguistic traditions, and (3) at the same time, to develop the children's competence in a language of local importance (p.25).

The authors acknowledge that the students in the trilingual programs were highly capable and motivated youngsters, but point out that the existing evidence (e.g., Cziko, 1975) pertaining to the suitability of single French immersion programs for students who are less economically and intellectually advantaged suggests that these students would also benefit academically and linguistically from programs of double immerson.

3. Ontario Heritage Languages Program (Keyser and Brown, 1981)

The only large-scale research to be conducted on the Ontario Heritage Languages Program (HLP) since its inception in 1977 is the survey of parental and teacher perceptions carried out by the Metropolitan Separate School Board (MSSB) in 1981. In 1982, the MSSB had about 35 000 students enrolled in the HLP out of a total student population of 94 000. Of these, 27 000 took Italian, Portuguese, or Ukrainian courses integrated into an extended school day.

Almost 11 000 parents representing more than 18 000 students completed the questionnaire. It was found that the vast majority of students enrolled in the HLP were born in Canada. Eleven per cent of students in the program were learning a language other than their parents' L1; in fact, nearly a thousand students studying Italian (15.6 per cent of total Italian enrolment) were not of Italian heritage.

Parents were highly satisfied with their children's progress in learning the heritage language. In speaking and understanding, for example, 88 and 90 per cent of respondents respectively thought their children's facility had improved "a great deal" or "some". More than 80 per cent thought that the program had contributed "a great deal" or "some" to their child's confidence and sense of self-worth. Respondents also felt that the program had increased communication between family members (80 per cent), provided a deeper appreciation of family heritage (81 per cent), and improved performance in other subject areas in the regular program (59 per cent).

Principals were similarly positive about the impact of the HLP in their schools, 61 per cent indicating that it had had a positive impact, only 6 per cent a negative impact. When principals were asked to break down the effects by principal, teachers, parents, and students, it became apparent that the overall effect was perceived as most positive on principals (78 per cent) and parents (82 per cent) and somewhat less positive on students

(57 per cent positive, 4 per cent negative) and teachers (55 per cent positive, 18 per cent negative). It is clear from this pattern and from other data in the survey that a small number of regular teachers perceive the HLP as disruptive and time-consuming. However, the overall trends in the survey data indicate a generally high level of satisfaction among all constituents with the HLP.

It is clear, however, that this type of questionnaire survey does not substitute for an evaluation of students' actual progress in learning the heritage language and its effects on other aspects of student progress. Also, it is possible that the recent (1982) controversy about the HLP and the further extension of the school day for 1982/83 may have altered somewhat the highly positive picture presented in the MSSB report.

4. Minority Francophone Programs

As a result of its official status, French is not usually regarded as a "heritage" language. However, the results of programs for minority Francophones are clearly relevant to more general issues related to the maintenance of minority languages and the effects of minority language instruction on the development of skills in the majority language. Three research studies conducted in Manitoba, Alberta, and Ontario are relevant in the present context.

(a) Manitoba Francophone Study (Hébert et al., 1976)

A large-scale study carried out by Hébert et al. (1976) among third, sixth, and ninth grades, in which minority Francophone students in Manitoba were receiving varying amounts of instruction through the medium of French, found that the amount of French-medium instruction showed no relationship to children's achievement in English. Francophone students receiving 80 per cent instruction in French and 20 per cent instruction in English did just as well in English as students receiving 80 per cent instruction in English and 20 per cent instruction in French. However, the amount of instruction in French (L1) was positively related to achievement in French. In other words, students' French benefited at no cost to their progress in English (L2).

This study was replicated in Manitoba three years later with essentially the same results (Donald Foidart, personal communication). The only difference was that there was some evidence that Francophones' academic motivation was greater as a result of their being in an intensive French program as opposed to one in which French was used for only part of the school day.

(b) Edmonton Francophone Study (Carey and Cummins, 1978)

This study examined the achievement in English and French of all Grade 5 students attending the French-English bilingual program (80 per cent French, 20 per cent English, K-Grade 6) of the Edmonton Catholic School Board (ECSB). Students were divided into three categories on the basis of home language use, namely, English (N=41), French (N=26), and Mixed French/English (N=30). In the Mixed group a variety of patterns of French and English use were apparent and thus, unlike the first two groups, this group was not homogenous in terms of linguistic background. Students in the three groups were of similar IQ levels.

Performance in French and English academic skills was assessed by means of cloze tests developed by the Bilingual Education Project of the Ontario Institute for Studies in Education (Lapkin and Swain, 1977). A significant difference was found between French and English home language groups on the French cloze test (French mean = 16.3, English mean = 13.1, $p < .05$), but no differences were apparent between the three groups on the English cloze test. The ECSB Francophone group performed about as well in French as a Franco-Ontarian group (attending separate Francophone schools), while on the English cloze test all three ECSB groups performed equivalently to English-background students in Ontario immersion and regular programs (data reported in Lapkin and Swain, 1977).

In summary, the findings are entirely consistent with those of the Manitoba study in showing that minority Francophone students receiving the bulk of their instruction in French develop English academic proficiency equivalent to that of students (Francophone or Anglophone) receiving the bulk of their instruction in English. Clearly, there is considerable transfer of academic skills across languages similar to what has been observed in French immersion programs (Swain and Lapkin, 1982).

(c) Welland Francophone Study (Popp, 1976)

Popp (1976) compared Grade 12 Francophone and Anglophone students in Welland, Ontario, on a battery of English achievement tests. The Francophone students were in a program that had utilized English for about 50 per cent of the time in secondary school. French was the major language of instruction in elementary school, although it was not specified exactly what proportion of the time these students had been exposed to each language of instruction in elementary school. The Anglophone students attended a neighbouring English-language secondary school and were thus of approximately similar socio-economic status.

Popp reports that the Francophone and Anglophone students performed equivalently in English reading comprehension and in the mechanics of English (spelling, grammar, and usage). However, differences were found in favour of the Anglophone students in range of English vocabulary and in ability to deal with science concepts presented in English. Popp (1976) points out that the lower vocabulary score of Francophone students

> is not of such a severe nature that it in any way inhibits general conversation. Instead, it manifests itself only in the academic or technical situations such as those involved in the tests employed. Social conversation was not affected in any way (p. 371).

Differences observed between Francophone and Anglophone groups in this study should be interpreted cautiously because of the possibility of teacher-related differences and possible non-equivalence of students in terms of socio-economic background or ability. However, what does emerge clearly once again is the generally similar level of performance in English academic skills between Francophone and Anglophone students despite much less exposure to English (in home and school) on the part of the Francophones.

In conclusion, the findings of bilingual program evaluations involving minority Francophone students are consistent with those of other Canadian bilingual programs in showing little or no relationship between achievement in the majority language (English)

and amount of instruction received through the medium of that language. In the three studies reviewed, Francophones taught largely in French achieved levels of English reading skills equivalent to those of students taught largely in English, although in Popp's study differences were noted in other aspects of English academic skills. It should also be noted that none of the studies reviewed investigated English writing skills. The writing skills of Franco-Ontarian students have been investigated (e.g., Mougeon et al., 1981), but statistical comparisons in relation to language-of-instruction variables have not been carried out.

B. TRANSITIONAL BILINGUAL PROGRAMS

The aims of transitional bilingual programs are usually very different from those of enrichment programs in that improving the minority student's achievement in the majority language is almost always an important program goal. The focus is on "salvaging the child" rather than enriching the child or salvaging the language and culture. The theory underlying transitional programs assumes that academic improvement may result either as a direct result of L1 instruction (e.g., through facilitation of classroom participation) or as an indirect result of factors such as improved self-esteem, greater parental involvement, etc. Thus it is assumed that there exists some impediment to the minority student's achievement in a regular English "submersion" (Cohen and Swain, 1976) program. The poor academic achievement of minority students in many contexts adds credence to this assumption (Cummins, 1981b), but the causes of students' failure are as yet inadequately understood. In the Canadian context, earlier findings suggested that minority students born in Canada (with the exception of Franco-Ontarian students) tended to perform quite well in English-only programs (see Cummins, 1981c, for a review), but more recent informal observation and test data in several Metropolitan Toronto school systems suggests that a substantial proportion of minority students born in Canada are experiencing academic difficulties. Thus, the question arises as to whether transitional bilingual programs (or enrichment programs) might be an effective way of facilitating these students' academic progress.

1. Italian Kindergarten Transition Program in Toronto (Shapson and Purbhoo, 1977)

In the early 1970s the Toronto Board of Education implemented an experimental transition program which allowed the curriculum to be presented in the child's L1 (Italian) during the two introductory kindergarten years of schooling (i.e., ages 4-5, 5-6). Originally the proposal had recommended that literacy skills be introduced in L1, but this was rejected by the board because the Ontario Education Act prohibited the use of languages other than English or French as a medium of instruction except on a temporary basis to ease students' integration into the school system. Because of this legal requirement, promotion of Italian skills was not an objective of the program.

Almost all students in the program were born in Canada and had learned Italian (or dialect) as a first language. Seventy-nine per cent of the parents spoke Italian extensively with their children, but only 53 per cent of the children still spoke Italian as the main language at home. Only 7 per cent of students who had older siblings were spoken to in Italian by these siblings. Thus, at the start of the program some children used more English than Italian, whereas others spoke no English at all.

In the classroom, standard Italian, dialect, and English were all used quite freely with frequent spontaneous switching of languages by students and teacher. The proportion of English use increased consistently during the Junior Kindergarten year and by the Senior Kindergarten year "Italian was used only occasionally in activities involving the whole class, but more often with a few individuals who still used their mother tongue" (Shapson and Purbhoo, 1977, p. 489).

The evaluation of the transition program involved observations of verbal participation in the classroom, tests of language comprehension, teacher assessments of student progress, and parent questionnaires. Comparisons were made with students in regular kindergarten classes from two other schools whose students had language backgrounds similar to those of the program students. There is little reason to suspect initial pre-treatment differences between program and comparison students, since virtually all parents who were offered the transition option in the program school accepted it and the enrolment justified two transition classes.

Classroom observations showed that a significantly larger proportion of the transition classes participated in class discussions (59 per cent v. 43 per cent), and contributed both spontaneously (45 per cent v. 28 percent) and in response to questions (41 per cent v. 28 per cent). Shapson and Purbhoo (1977) suggest that

> Increased participation in class discussions may be considered a signal that the child feels comfortable and important in school. It might be viewed as an indicator of self-concept (p. 490).

No group differences in English (or Italian) language comprehension as measured by the Peabody Picture Vocabulary Test were found in either Junior or Senior Kindergarten. Teachers' ratings of overall academic performance revealed more positive comments for the transition students in the Senior Kindergarten year. Shapson and Purbhoo caution, however, that this result may be due to differences in teachers' styles of reporting.

It was also reported that "while parents from the comparison group expressed as great an interest in their children's education, the transition group parents attended more school functions, participated more in classroom events and talked regularly with the teacher" (1977, P. 493). Shapson and Purbhoo attribute this greater involvement to the obvious fact that a common language makes communication easier.

In summary, the program objectives were clearly met in that participation by students and their parents in the educational process was facilitated by the incorporation of Italian as a medium of instruction.

2. English-Italian Kindergarten Program in Ottawa (Egyed, 1973)

Egyed (1973) compared the academic progress in Senior Kindergarten of three groups of Italian-background students randomly assigned to (1) a full-day English kindergarten, (2) a half-day English, half-day Italian kindergarten, and (3) a half-day English, half-day French kindergarten. Using a pre- and post-test design, Egyed reported no significant

differences in English academic progress between students in the bilingual Italian-English kindergarten compared with those in the full-day English program. Thus, using Italian as the medium of instruction for half the school day did not interfere with students' progress in English.

However, Italian-background students in the French-English bilingual kindergarten program obtained significantly lower scores in English academic skills than students in either of the other two programs. The French-English bilingual students were reported to have made "relatively low gains in auditory psycho-linguistic development" (Edwards and Casserly, 1973, p. 248).

In summary, this study is consistent with the others reviewed in showing that time spent with minority students' L1 as the medium of instruction appears to involve no academic costs to their progress in English.

3. Vancouver Punjabi-English Transition Program (Moody, 1974)

This program was intended to assist newly-arrived 5- to 8-year-old immigrant children from the Punjab to learn English and integrate into the regular program. The teacher used both Punjabi and English for instructional purposes. In general, the program appears to have effectively met its objectives of promoting both language and self-concept development in that the experimental students made at least as rapid progress as comparison East Indian students. By the end of the first year of the program, more than half the students were judged to have made sufficient progress in English to merit placement in the regular English program.

4. Toronto Italian and Portuguese Transition Programs (Henderson, 1977)

These experimental programs were developed in the Metropolitan Separate School Board (MSSB) for children in Grades 4, 5, and 6 who come directly from Italian- and Portuguese-speaking countries. A bilingual teacher maintained an academic program in students' L1 over the course of one year while English was being acquired. The evaluation design for Italian and Portuguese programs differed somewhat and thus each will be considered separately.

Italian Program Results. The Italian class was begun in September 1973 with fifteen recently-arrived students who could read and write in Italian. The control sample was selected from comparable students who had been in an ESL program the previous year and had immigrated to Toronto approximately one year earlier. The control students were post-tested with the Metropolitan Achievement Test (MAT) in October 1973 and the experimental group was tested in October 1974. Parents of both groups were also interviewed. The lack of a pre-test and the small number of students clearly warrant caution in interpreting the results, although there appears to be no obvious reason why the two groups would differ in initial characteristics.

No statistically significant differences were found on the MAT, but differences of about one half-year in grade-equivalents were found in favour of the control group in spelling and in favour of the experimental group in math concepts and problem solving.

Henderson (1977) points out that

> Selection of the control students biased the results against the experimental program since at the time of testing, the control students had been in Canada approximately eight months longer than the students of the experimental program (a difference of 22 to 14 months on the average) (p. 4).

The parent interviews revealed that although both sets of parents claimed that they contacted the school equally often, two-thirds of the experimental group knew the name of their children's teacher, while none of the control group were able to identify the teacher by name. Henderson (1977) summarizes the parent interview data as follows:

> ...parents of experimental students reported that their children spoke more Italian around home and had higher academic aspirations which were also more consistent with those of the parents themselves. Parents with children in the experimental program had more specific knowledge of the school and its personnel (p. 5).

Thus, the findings are generally similar to those of other transition programs (e.g., Shapson and Purbhoo, 1977) in suggesting good academic progress and greater parental involvement than in regular English programs. The better math performance (in English) of the experimental group despite their shorter length of residence is consistent with the assumption that, at least at these grade levels, L1-medium instruction can facilitate students' continued progress in subject matter acquisition. The lag of the experimental group in spelling is consistent with French immersion data showing that immersion students take longer to catch up in spelling than in other aspects of English language arts. Thus, spelling may be more sensitive to specific English language arts instruction than, for example, vocabulary or reading comprehension.

Portuguese Program Results. The Portuguese evaluation involved a larger number of students (two experimental classes) and had a tighter research design than the Italian study. The program was begun in September 1974 in two schools in the same general area. Control students were drawn from three classes in two other schools in the same area.

A Portuguese translation/adaptation of the MAT was used as a pre-test and the English version was given as the post-test. An analysis of covariance design was used to help control for any pre-test differences. Significant post-test differences in favour of the experimental group were observed on three subtests of the MAT, namely, language, math concepts, and problem solving. Differences favoured the experimental group on six out of seven subtests, and on several of these subtests (including spelling) by the equivalent of nearly half a year of progress.

Students' oral English was also assessed by means of a picture description task. Both groups produced approximately the same number of sentences, but the sentences of the experimental students averaged significantly more words. Words-per-sentence (or "T-unit") is often used as an index of linguistic complexity (Hunt, 1970).

Verbal interactions in the experimental and control classes were observed in the early spring of the school year. It was found that in the experimental classes Portuguese was used by the teachers to support explanations and instructions as well as in informal student-student and teacher-student conversation. In the control classes, only English was used in teacher-student exchanges and students were less likely to use Portuguese in informal conversation.

In the spring of 1976, one year after post-testing, students' attitudes towards their language and ethnicity were investigated. A large majority of the students in the experimental group who could be located for the follow-up claimed they would like to know Portuguese better (14 out of 17), compared with only two out of six in the control group. In general, the experimental group had considerably more positive attitudes towards the learning of Portuguese.

In conclusion, the findings of these two evaluations support the educational rationale and feasibility of bilingual transition programs. Neither evaluation of course can be regarded as conclusive evidence. Many extrinsic factors could have contributed to the results obtained (e.g., improvement resulting from the fact that the program is new [i.e. Hawthorn effects], teacher differences, failure to control adequately for possible pre-program differences [despite analysis of covariance], etc.). However, few evaluations of innovative programs are without such limitations, and thus policy must be based not on one or two isolated studies but on consistency of trends across contexts. The trends that emerge from Canadian enrichment and transitional bilingual programs are discussed below.

CONCLUSIONS

The trends that emerge can be summarized in relation to the three major foci of the present review, namely, the effects of minority language programs on the individual student, community groups, and the educational system as a whole.

Virtually all the evaluations reviewed, whether enrichment or transition, show clearly that time spent with the minority language as the medium of instruction results in no academic loss to students' progress in the majority language. As in French immersion programs, students who receive English-medium instruction only part of the time perform at least as well in English academic skills as students who have been exposed to English-only instruction.

A second trend to be noted is that students in some bilingual or trilingual programs perform better in aspects of English academic skills than do comparison groups in monolingual programs. In enrichment programs this trend (e.g., Cummins and Mulcahy, 1978; Edmonton Public Schools, 1980; Genesee and Lambert, 1980) may be due to the subtle linguistic and cognitive benefits which many studies suggest accrue to students who develop proficient skills in two languages (see Swain and Cummins, 1979, for a review). In the case of transition programs, the faster academic progress made by the experimental groups can presumably be attributed to the direct facilitating effects of being better able to participate in the classroom/learning context as well as to indirect effects of factors such as greater parental involvement.

A third finding worthy of note is the generally positive attitudes of students in bilingual programs towards both the program itself and their own language and culture. No comprehensive study has been undertaken to investigate the effects of various minority language programs on students' attitudes, but the available data reviewed above suggest that the success students experience in learning languages in the context of bilingual and trilingual programs leads to greater motivation to maintain and/or develop linguistic skills. In this regard, it is interesting to note Feuerverger's (1982) finding that Grade 8 Italian-background students in a trilingual program in Metropolitan Toronto (approximately 50 per cent French, 40 per cent English, 10 per cent Italian, starting in Grade 5) showed significantly more positive attitudes towards both Italian and French than Italian-background students not in the French-English program, and they also used more Italian in out-of-school contexts.

Community effects of minority language programs have received less attention than the scholastic effects on individual students. However, all the reported findings are positive, and increased parental participation and involvement were noted in several of the transition programs.

The effects of Canadian minority language programs on the educational system as a whole have not been investigated in any formal way. The programs reviewed above have been, for the most part, small-scale individual programs which have caused few ripples for the system as a whole. The exception, of course, is the Ontario Heritage Languages Program, but apart from the MSSB survey, no attempt has been made to investigate its ramifications for the educational system as a whole.

In summary, the Canadian data show no counter-indications to the implementation of small-scale bilingual and trilingual programs in terms of both their effects on individual students' academic and affective development and their effects on ethnocultural community groups. One can only speculate, however, on the effects for the educational system as a whole were such programs to be implemented on a large scale. Relatively small-scale implementations (e.g., of the Ukrainian bilingual program in several Manitoba school systems) appear to have had relatively little effect on school systems as a whole.

III Minority Language Programs in the United States

THE POLICY CONTEXT

The education of minority language students is currently extremely controversial in the United States as a result of the institutionalization of bilingual education on a large scale. With the passing of the 1968 Bilingual Education Act, the U.S. government first endorsed bilingual education as a means of assisting minority language children atttain equality of educational opportunity. However, it was not until after the Supreme Court decision in the Lau v. Nichols case in 1974 that bilingual programs expanded across the entire country. In this decision the Supreme Court upheld the contention of a Chinese family that their child was denied access to equal educational opportunity because he was not sufficiently proficient in English to profit from instruction in that language. Traditional bilingual education, in which students are given instruction partially through their first language (L1) until it is presumed that they have attained sufficient proficiency in English to benefit from English-only instruction, was the principal remedy recommended by the Office of Civil Rights in response to the Supreme Court decision. Following the Lau v. Nichols decision, the Equal Educational Opportunities Act of 1974 stated:

> No state shall deny equal educational opportunity to an individual on account of his or her race, color, sex, or national origin, by the failure of an educational agency to take appropriate action to overcome language barriers that impede equal participation by its students in its instructional programs (section 1703 [f]).

In the early 1980s federal and state laws have moved to give more local control to school districts in implementing "affirmative steps" to help reduce the number of minority students who fail in school. Because of the unpopularity of bilingual programs in many areas, this has resulted in an expansion of intensive English programs.

The far-reaching Lau decision came at a time when the number of minority language students was increasing rapidly as general school enrolment continued to decline. For example, a survey conducted in 1976 by the National Center for Educational Statistics showed that approximately 28 million persons (one in eight) in the United States had non-English language backgrounds. These numbers were projected to increase to 30 million in 1980, 34.7 million in 1990, and 39.5 million in 2000 (Oxford et al., 1981). Spanish speakers comprised the largest language group in the non-English language population. The 1976 survey estimated a Spanish-speaking population of 10.6 million; however, the 1980 census showed a Spanish-speaking population of 14.6 million, a 60 per cent increase over the 1970 figures.

The projected numbers of children aged 5 to 14 of "limited English proficiency" was estimated at 2.5 million for 1976, 2.4 million in 1980, and rising to 2.8 million in 1990, and 3.4 million in 2000 (Oxford et al., 1981). These figures do not take into account the

large numbers of undocumented immigrants in the United States. Specific examples attest to the growth in the minority language student population: in California, for example, ethnic minority students (i.e., including blacks) will become a majority of the total student population by the mid-eighties; in Los Angeles, it is estimated that Hispanic students will comprise more than 50 per cent of the school age population by 1985 (Tucker and Gray, 1980).

EFFECTIVENESS OF BILINGUAL EDUCATION: GETTING THE QUESTIONS RIGHT

The usual, and controversial, question asked in the United States context--namely, "Is bilingual education effective?"--assumes both that bilingual education can reasonably be thought of as one phenomenon and also that we have a clear understandng of what "effectiveness" implies. The question is not amenable to answers because neither of these conditions is met.

There are a large variety of bilingual education program models, and, within models, pedagogical practices and student populations vary enormously. For example, within transitional models, some programs have exit criteria which mainstream students after as little as six months, whereas in other programs students may receive six years of bilingual education. The amount of time devoted to L1 can vary from more than 80 per cent in the early grades of some programs to virtually none, although in most programs considerably less than 50 per cent of the time is spent in L1-medium instruction. The same teacher might use both English and the child's L1 for instruction either concurrently (i.e., frequent translation) or at different times of the day (e.g., morning English, afternoon L1.) An alternate-days approach might also be used, with English predominant on one day and L1 the next.

A second issue concerns the meaning of "effectiveness", specifically the expectations about what a bilingual program should achieve and how long it should take to do it. This is an important issue in evaluating the results of bilingual programs. For example, if the theory or expectation of how a bilingual program should work dictates that students should be capable of transferring to an English-only program within a year, then a bilingual program that does not achieve this goal is ineffective. However, if students do reach some arbitrary criterion of English proficiency within a year, and then fail in the English-only program, bilingual education can also be considered ineffective.

On the other hand, a very different theory or set of expectations about how language proficiency is related to academic success, and about how bilingual education works, might be held; specifically, it has been argued that it can take most of the elementary school years for minority language students to deepen their academic knowledge of both L1 and English in order to transfer successfully to an all-English program (Cummins, 1980; Troike, 1978). If this is a valid assumption, then the effectiveness of this type of "long-term" transitional bilingual program could not be adequately assessed until students had completed most of their elementary schooling in the program.

The point is that the deceptively simple question of the extent to which bilingual education is effective is not amenable to a clear-cut answer because of the enormous range of bilingual program options and the lack of theoretical consensus about how long a child requires bilingual support to develop effective academic skills in English. Thus, in

reviewing research data regarding the effects of bilingual education on individual students, the focus will be on two questions which are, in principle, capable of being answered:

1. Do students in bilingual programs develop less adequate English academic skills as a result of time spent in L1-medium instruction?

2. Is there evidence that under some social and instructional conditions minority students in bilingual programs perform better in English academic skills than minority students in English-only programs?

Because of the extremely large number of evaluations of bilingual programs carried out in the United States, it is impossible to review all the data in detail here. Instead, previous reviews of the data will first be considered and then examples of some of the most influential recent evaluations will be reviewed in relation to the two research questions outlined above.

PREVIOUS REVIEWS OF U.S. BILINGUAL EDUCATION DATA

The most prominent reviews of research findings on bilingual education in the United States are those of Troike (1978), Dulay and Burt (1979), Zappert and Cruz (1977), and Baker and de Kanter (1981). (The earlier review by Engle [1975] focused largely on research conducted outside the United States.) Of these four prominent U.S. reviews, the first three reach conclusions supporting the effectiveness of bilingual education in promoting academic skills among minority students; however, the Baker/de Kanter review is by far the most comprehensive and its conclusions have generally been interpreted as not supportive of transitional bilingual education. All reviewers comment on the poor methodological quality of many Title VII (bilingual education) evaluations and base their conclusions only on those they consider acceptable. However, the criteria of methodological acceptability adopted by Baker and de Kanter differ in many respects from those in the other reviews.

Dulay and Burt (1979, p.2) summarize the results of their review and Troike's as follows:

> Despite the recentness of this complex innovation, more than half of the findings show that bilingual education worked significantly better than monolingual programs for LES/NES (limited English-speaking/non-English speaking) students. Another recent survey has revealed 12 more research studies conducted since 1976 which demonstrate the effectiveness of bilingual instruction for LES/NES students (Troike, 1978).

On the basis of the fact that several evaluations showed that students in successful bilingual programs attained grade norms in English academic skills only in the later grades of elementary school, Troike (1978) suggested that bilingual instruction may exert a cumulative effect. Thus, an early exit into English-only programs may prevent minority students from benefiting fully from the bilingual program. Cummins (1981c) has also suggested that a quick-exit transitional policy is often educationally inappropriate in view of the fact that it takes minority students considerably longer to attain age-appropriate levels in English academic skills than in face-to-face communicative skills.

In summary, the positive reviews claim that there are sufficient individual bilingual program evaluations showing significantly improved academic progress by minority students to support the general educational principles underlying bilingual education. The relative paucity of positive evaluations in comparison with the total number of bilingual programs in operation is attributed to (1) the recency of bilingual programs, (2) initial implementation difficulties, and (3) lack of usable data from the majority of program evaluations because of methodological inadequacies.

The Baker/de Kanter report was released in September 1981 and its major conclusions are very different from those of previous research reviews. These conclusions are as follows:

> - Schools can improve the achievement level of language-minorit children through special programs.
>
> - The case for the effectiveness of transitional bilingual education is so weak that exclusive reliance on this instructional method is clearly not justified ... Therefore ... each school district should decide what type of special program is most appropriate for its own unique setting.
>
> - There is no justification for assuming that it is necessary to teach nonlanguage subjects in the child's native tongue in order for the language-minority child to make satisfactory progress in school...
>
> - Immersion programs, which involve structured curriculums in English for both language and nonlanguage subject areas, show promising results and should be given more attention in program development (de Kanter and Baker, Education Times, October 5, 1981).

The many critiques and rebuttals of the Baker/de Kanter report are too extensive to discuss in detail here. It is sufficient to quote the conclusions of the American Psychological Association (1982) to indicate that the Baker/de Kanter report has been extremely controversial among researchers despite its influence on U.S. policy:

> The Department of Education draft report entitled "Effectiveness of Bilingual Education: A Review of the Literature" does NOT support the conclusion that bilingual education is ineffective, inappropriate, or unnecessary. In fact, it does not even attempt to address such questions. In debates on bilingual education in which the issues are defined in such terms, the study can be ignored--because it is irrelevant...
>
> The scientific quality of the report is questionable. Inconsistencies are apparent in the application of the methodological standards utilized. The evaluation question addressed by the study was limited, and an arbitrary and narrow definition of "acceptable data" was utilized (pp. 8-9).

Similar sentiments are expressed in other critiques of the report (e.g., Willig, 1981/82).

Much of the difficulty in interpreting the Baker/de Kanter literature review derives from their categorization of vastly different forms of bilingual education as "transitional bilingual education" (TBE). In fact, the "structured English immersion" program which Baker and de Kanter describe as "promising" involved more L1-medium (Spanish) instruction (about 60 minutes per day) than a large number of so-called transitional bilingual programs in the United States.

In actual fact, the data reviewed by Baker and de Kanter are easily interpreted when the right questions are asked. A sampling of recent studies (several not included in the Baker/de Kanter review will be reviewed in order to illustrate the theoretical principles that appear to be operating in bilingual programs for minority students. The evaluations reviewed here are not necessarily representative of the totality of U.S. bilingual program evaluations; however, the theoretical principles they illustrate are consistent with virtually all of the evaluation data reviewed by Baker and de Kanter, Troike, and other U.S. commentators.

In the case of several of these evaluations, the enrichment/transitional distinction is not entirely clear-cut, partly because the goals of many U.S. bilingual programs in relation to L1 promotion are unclear. Thus, the program evaluations are reviewed according to the following categories: (1) a statewide bilingual program evaluation, (2) two individual longitudinal evaluations, (3) a kindergarten evaluation, (4) two pre-school program evaluations. The detail provided in reviewing these studies varies according to the detail (e.g., regarding curriculum) provided in the original evaluation reports as well as according to their potential relevance to the Canadian context.

ILLUSTRATIVE PROGRAM EVALUATIONS

1. Colorado State-wide Evaluation

Egan and Goldsmith (1981) reported that in about 90 per cent of the thirty-nine Colorado bilingual projects for which data were available, non-English language background students showed a rate of academic progress at least as good as that normally expected for all students. In the evaluations conducted in 1977/78, 1978/79, and 1979/80 at four grade levels (K-Grade 3), it was found that in 35 per cent of the classrooms studied non-English language background children gained at least an additional .33 of a year's growth in academic achievement beyond that expected by national norms (Table 1, p. 13). In the 1979/80 data it was reported that in 64 percent of the K-Grade 3 classrooms non-English language background students gained at least 14 per cent more than would be expected based on national norms (Table 2, p. 14). As in some other U.S. bilingual programs, English-background students were involved in the Colorado programs and showed similar patterns of gains.

Although methodological objections have been raised by Baker and de Kanter (1981) in relation to the Colorado results, they do not question the fact that both majority and minority students in the bilingual programs, with less time in English-medium instruction, have clearly not suffered in any way in terms of their English academic development.

2. Rock Point Navajo Study (Arizona)

Before the bilingual program was started in 1971, Navajo children in the Rock Point school were about 18 months behind U.S. norms in English reading by the end of the sixth grade despite intensive teaching of English as a second language. The bilingual program used Navajo as the major initial medium of instruction and continued its use throughout elementary school. English reading instruction was delayed until Navajo reading skills were well established (mid-second grade), after which English was used for about 75 per cent of the time. By the end of the sixth grade, children in the bilingual program were performing at U.S. grade norms in English reading despite considerably less exposure to English than previously (Rosier and Holm, 1980).

3. Nestor School Bilingual Program (San Diego)

This program involved both Spanish- and English-background students and used a team-teaching approach in which instruction in the early grades was primarily in the child's L1. Gradually the proportion of instruction in L2 was increased, until by Grade 4 approximately 50 per cent of instruction was in each language. The evaluation of the program (Evaluation Associates, 1978) showed that Spanish-background students in Grade 5 had gained an additional .36 of a year's growth in English reading for each successive year they spent in the bilingual program, while the Grade 6 figures showed Spanish-background students gaining an additional .59 of a year's growth for each successive year in the program. The authors carried out an analysis on the Grade 5 data in which they used the observed growth factor to predict performance if all Spanish-background students had been in the program for the full six years. The figure obtained was a grade equivalent of 5.1, only two months behind the English-speaking children in the regular program. They conclude that

> continuity in the program is probably the most important single factor in determining performance in English reading for the Spanish speaking children (1978, p. 36).

This conclusion is supported by the fact that Spanish-background students who had spent five years or more in the bilingual program at the elementary level tended to perform slightly better in English reading than the school average at the junior high school level, despite the fact that at least 37 per cent of the comparison group were originally native English speakers. In mathematics, the Grade 6 Spanish-background children in the Nestor program were over a year ahead of the Spanish speakers in the comparison district (which operated a transitional program) and only one month behind grade level. The English-background participants in the Nestor bilingual program also performed at a higher level than the comparison groups on a large majority of measures. It is difficult to reconcile these findings with the assumption of many U.S. press commentators that bilingual instruction retards the growth of English academic skills.

4. Bilingual Kindergarten Programs (Legaretta, 1979)

A study carried out by Legarreta (1979) in California compared the effectiveness of three types of bilingual treatments with two types of English-only treatments in facilitating the development of English communicative competence in Spanish-background kindergarten children. The three bilingual treatments were found to be significantly superior to the

two English-only treatments in developing English language skills. The most effective program was one with balanced bilingual usage (50 per cent English, 50 per cent Spanish)--in other words, the one with the least amount of English-medium instruction.

5. Bilingual Bicultural Pre-school Programs (Juarez and Associates, 1982)

Between 1976 and 1979, Head Start funded the development of four distinct bilingual bicultural pre-school models for use with Spanish-speaking children. The longitudinal evaluation of these models is extremely impressive in its thoroughness in that it involved stratified assignment of children on the basis of Spanish or English language preference, age, sex, and prior pre-school experience to experimental (N=45) and control (N=45) groups in each of eight Head Start sites, as well as on-site observation to assess degree of implementation of each program.

The results for the "Spanish-preferring" children are summarized by Juarez and Associates (1982) as follows:

> . On three out of four English language measures, children in the bilingual bicultural curricula, as a group performed significantly better than Head Start children not in the curriculum. These three measures assessed: a child's ability to use English; a child's ability to think abstractly; a child's ability to coordinate eye and hand movements.
>
> . On the fourth English language measure children in the bilingual bicultural curricula, as a group performed significantly better than Head Start children not in the curricula. The difference, however, was not statistically significant. This measure assessed a child's ability to understand English.
>
> . On two of five Spanish language measures, children in the bilingual bicultural curricula, as a group performed significantly better than Head Start children not in the curricula. These measures assessed a child's ability to use Spanish and to think abstractly in Spanish.
>
> . On the other three Spanish language measures children in the four bilingual bicultural curricula, as a group performed as well as Head Start children not in the curricula.
>
> . Classroom observations supported these findings for Spanish-preferring children. On the whole, children in the bilingual bicultural curricula increased their English language use in the classroom by 21% from Fall to Spring. This increase was accompanied by the use of grammatical forms which they had not used regularly early in the year (pp. ii-iii).

The English-preferring children performed as well on all English language and Spanish language measures as Head Start children in monolingual pre-school curricula. In other words, bilingual pre-school experiences had no detrimental effects on their English language skills, which, classroom observations confirmed, showed an improvement in quality

over the course of the year. Both parents and teachers showed extremely positive attitudes towards the bilingual bicultural curricula.

6. Intensive L1 Pre-school Program (Carpenteria Unified School District, 1982)

The proposal to implement an intensive Spanish-only pre-school program in the Carpenteria School District near Santa Barbara, California, derived from district findings showing that practically all of the Spanish-speaking students entering Kindergarten each year lacked adequate skills to succeed in the district's kindergarten program, despite the fact that most attended a pre-school program such as Head Start or the Community Day Care Centre (designated as "non-experimental below). In these programs English and Spanish were used concurrently with the Spanish-dominant children and strong emphasis was placed on the development of English (L2) skills. According to the district kindergarten teachers, students who had attended these pre-school programs often mixed English and Spanish into "Spanglish".

The major goal of the experimental pre-school program in Canalino school, which was conducted entirely in Spanish, was to bring Spanish-dominant children entering Kindergarten up to a level of readiness for school similar to that attained by English-speaking children in the community. The program also sought to make parents of the project participants aware of their role as "the child's first teacher" and to encourage them to provide specific types of experiences for their children in the home.

The pre-school program itself involved the integration of language with a large variety of concrete and literacy-related experiences. As summarized in the evaluation report:

> ...the development of language skills in Spanish was foremost in the planning and attention given to every facet of the pre-school day. Lanugage was used constantly for conversing, learning new ideas, concepts and vocabulary, thinking creatively, and problem-solving to give the children the opportunity to develop their language skills in Spanish to as high a degree as possible within the structure of the pre-school day (1982, p.25).

Participation in the program was on a voluntary basis and students were screened only for age and Spanish-language dominance. Family characteristics of students in the Canalino experimental program were typical of other Spanish-speaking families in the community. More than 90 per cent were of low socio-economic status, and the majority worked in agriculture and had an average educational level of about sixth grade.

Two years of the project have been evaluated to this point (1980/81, 1981/82). In the first year the program started only in January 1981, owing to difficulties in finding a teacher. Thus, these students were exposed to only six months of the experimental program. Students' performance on the School Readiness Inventory (SRI), a district-wide screening measure administered to all incoming kindergarten students, was assessed, as well as performance on receptive language and math concepts subtests of the El Circo test, normed nationally on Spanish-speaking students living in the United States. Performance on the Bilingual Syntax Measure (BSM) in English was also assessed.

SRI Results. The total scores for several years on the SRI for English-speaking students, Spanish-speaking students not in the experimental pre-school program, and Spanish-speaking students in the program are presented in Table 1.

Table 1

SRI Total Scores from 1979/80 to 1982/83 for Students Entering Kindergarten*

Year	English-speaking	Non-experimental Spanish-speaking	Experimental Spanish-speaking
1979/80	23.1 (122)**	14.0 (33)	
1980/81	22.8 (140)	15.2 (39)	
1981/82	23.1 (131)	13.8 (11)	17.8 (30)***
1982/83	23.2 (123)	14.6 (17)	21.6 (21)

* A score of 20 or better is regarded as predicting a successful kindergarten year for the child.

** Number of students.

*** Exposed only to a six-month program.

The data show a high level of consistency over the years for non-experimental Spanish speakers, suggesting that the experimental group was not exceptional in pre-program characteristics. The non-experimental Spanish speakers performed about two standard deviations below the mean for the number, attending skills, and concepts subtests and one standard deviation below in fine motor skills. In the second year of operation of the experimental program, the Spanish-speaking students attained parity or near parity with English speakers on all SRI subtests.

EL Circo Results. On the El Circo subtests, the 1981/82 Canalino experimental group attained a post-test (June '82) percentile rank of 73%ile in language and 85%ile in math concepts compared with 7%ile and 15%ile for Spanish-speaking non-experimental students. The pre-test (November '81) scores of the experimental group were slightly above the mean on both subtests (57%ile and 55%ile respectively). The gains in percentile ranking from pre- to post-test are interpreted as further evidence of program impact although the design is weakened by the fact that no pre-test was administered to the non-experimental group.

BSM Results. The BSM (Hernandez-Chavez, Burt, and Dulay, 1976) assesses mastery of syntax in oral language. Scores are distributed into five categories, 5 representing high (native-like) proficiency, 1 representing extremely limited proficiency. The percentages of students scoring at level 3 or above in English and at level 5 in Spanish are shown in Table 2.

Table 2

Percentage of Spanish-speaking Students Entering Kindergarten Who Scored Level 3 or Higher on the English BSM and Level 5 on the Spanish BSM

Group	English BSM (Level 3)	Spanish BSM (Level 5)
Fall 1981 All (43) Spanish-speaking Students	42%	*
Fall 1982 All (38) Spanish-speaking Students	58%	*
Experimental 1982 Pre-school Students (N=22)	76%	81%
Non-experimental 1982 Spanish-speaking Students (N=17)	35%	53%

* No data reported.

The BSM results are remarkable given the fact that all the instruction in the experimental pre-school was in Spanish, whereas both Spanish and English were used in the non-experimental program. It appears likely that the highly effective language promotion that was going on in the experimental pre-school allowed children to acquire more of the English to which they were exposed in the enviornment.

Clearly a variety of factors contributed to the experimental pre-school program's success (e.g., parental involvement, presumably good teachers and curriculum). However, the results are of considerable interest in the present context because they show what is possible in a pre-school program for under-achieving minority students and add to the evidence that academically-relevant language skills transfer readily across languages. The strong program emphasis on promoting L1 skills, with its concomitant lack of emphasis on English, has clearly had no negative effect on the development of either oral English or general academic skills.

CONCLUSIONS

The data that have been discussed do not demonstrate the effectiveness of bilingual (or L1-only) instruction in any absolute sense, nor do they show that L2-only programs are necessarily ineffective or inappropriate. However, the data clearly dispel the myth that L1-medium instruction will impede the acquisition of English academic skills. Virtually all the U.S. data reviewed by Baker and de Kanter (1981) similarly show this common assumption to be false. As with the Canadian results reviewed in chapter 2, some form of transfer of academic skills across languages must be invoked to explain the fact that less time spent in English-medium instruction exerts no negative effects on the development of English academic skills.

A second conclusion which emerges from the U.S. data is that some bilingual programs have been highly effective in developing English academic skills among minority students who might typically have failed in school. The explanation of this trend is likely to be complex, involving an interaction between linguistic, cognitive, community, and educational factors (see Cummins, 1979, 1981c). Discussion of this issue is beyond the scope of this report; suffice it to say that improvement of students' performance is clearly not an automatic consequence of using L1 as a medium of instruction, either for enrichment or for transitional purposes. Nevertheless, the use of L1 for instructional purposes, in combination with other factors as yet inadequately understood, can play a significant role in helping to reverse the pattern of school failure which has characterized some groups of minority language children.

A third factor which emerges in many U.S. evaluations is the potential for greater parental involvement in programs that use L1 as a medium of instruction. This has certainly not happened in the majority of bilingual programs, but in a substantial minority this parental and community involvement appears to have played a significant role in the success of the program. For example, in the Carpenteria pre-school evaluation, kindergarten teachers reported much greater and more critical minority parent involvement for children who attended the Spanish-only pre-school program than was previously the case (Salvador Campos, November 1982: personal communication).

A fourth consideration, which has been considered in very few of the program evaluations, concerns the impact of bilingual programs on the educational system as a whole. As one might infer from the controversy (surrounding bilingual education) among educators, the impact has been considerable. In terms of cost, the additional expense incurred for language assistance instruction has been estimated at between $100 and $500 per student, depending on the specific program in operation. Pull-out programs (e.g., for ESL assistance) were found to be more costly than integrated classes, whether bilingual or largely monolingual (Carpenter-Huffman and Samulon, 1981). With the increase in the limited-English-speaking population and the general decrease in enrolment and revenues, many monolingual English teachers have been concerned for their job security, and this has led to resentment in regard to the bilingual program. Thus, bilingual education has been associated with an increase in tension in some school systems. On a more positive note, bilingual education has, in recent years, given rise to increased concern among educators to provide an appropriate education for limited-English-speaking students, and many teachers have become actively involved in professional development activities designed to promote their understanding of processes of second language and bilingual development (see, e.g., California State Department of Education, 1981).

In summary, the research data suggest that although there is considerable variation in the quality of bilingual programs in the United States, overall students' progress appears to be at least as good as, and often better than, that of minority students in monolingual English programs. Although bilingual programs have been controversial among educators and the general public, any negative impact of this controversy on the educational system as a whole appears to be more appropriately attributed to general problems of system-change than to the specific influence of bilingual education in itself.

IV Minority Language Programs in Europe

THE POLICY CONTEXT

In Europe, it is estimated that as a result of the economic expansion of the 1960s, there are two million children of migrant workers attending schools in the European Economic Community (EEC) (European Commission, 1978). More than 50 per cent of these (100 000 each year) fail to obtain any job qualification at the end of compulsory schooling. The growth in the immigrant student population is such that by the year 2000 one-third of the European population under 25 will be of immigrant background (Chaib and Widgren, 1976).

The seriousness with which these trends are viewed can be seen in the following comment from an official EEC document:

> Unless the Member States take immediate action on a scale commensurate with the number of immigrants, their educational systems will continue to filter out second-generation migrants into a sub-proletariat whose resentment will rapidly create an explosive situation (European Commission, 1978, p. 15).

The teaching of L1 is also regarded by the EEC as an important means of promoting educational survival for immigrant students:

> No-one now disputes that the successful integration of immigrants into the host countries' schools requires special education measures. The great innovation of recent years is that the mother tongue is now regarded as a significant component of the child's personality, which is crucial to his psychological wellbeing and facilitates integration into a new environment (European Commission, 1978, p. 15).

This statement reflects a significant change in educational policy within the EEC. In 1977, the EEC issued a directive on the education of the children of migrant workers which required member states by 1981 to "take appropriate measures to promote, in co-ordination with normal education, teaching of the mother tongue and culture of the country of origin..." (EEC Council Directive, July 25, 1977).

This policy has not been universally endorsed by EEC countries. Britain, for example, advanced four objections to the directive (Tosi, 1981): (1) provision of mother tongue classes places too great a financial burden on member countries; (2) the policy is primarily intended to facilitate reintegration of migrant children into the country of origin on return, whereas Britain's non-English-speaking population is of either immigrant (i.e., intending to remain in Britain) or indigenous minority (e.g., Welsh) background; (3) "separate" education would be divisive; (4) local education authorities would resist implementation of policies they oppose in principle. As a result of this type of objection considerable debate has taken place in Britain about appropriate ways of implementing the EEC directive.

In other EEC countries, the education of first- and second-generation (im)migrant students is similarly controversial. In Germany, for example, two major educational models for minority education exist, namely, the Bavarian model involving primarily L1-medium instruction with German taught as a second language, and the integration model involving German-medium instruction with L1 usually taught as a subject (Council of Europe, 1981). The integration model predominates in German provinces other than Bavaria, and many German social scientists have accused the Bavarians of racist motives in creating a separate education system for linguistic minorities (see Rist, 1978, and Skutnabb-Kangas, 1981a, for discussion).

Sweden, although not a member of the EEC, has experienced considerable debate about the desirability of minority L1 instruction since the early seventies, and in 1977 it became obligatory for municipalities to offer some form of L1 instruction when requested by minority groups. Recent data based on a sample of 36 per cent of all municipalities that offer home language teaching showed that about 20 per cent of children were in home language classes (most teaching done in L1 for homogenous language background students), while 79 per cent were integrated into regular Swedish-language classes (often with some auxiliary L1 instruction). The remainder (about 1 per cent) were in either composite classes (minority and Swedish students in the same class taught by both a Swedish and a home language teacher) or preparatory classes (most lessons given in the home language on a short-term basis prior to integration into regular classes). This survey (National Board of Education, 1980) showed that in the home language classes the proportion of time spent in L1- and Swedish-medium instruction became equivalent at about Grade 5.

The goal of home language classes in Sweden is to achieve "active bilingualism", and the rationale underlying official Swedish policy is expressed by Jakobsson (1981):

> The findings in general indicate that when possible immigrant children should be given bilingual education not only to develop command of two languages but moreover to gain roots of identity, security and self-confidence. It is also important for the intellectual and emotional development of a child to be allowed to develop its first language. Furthermore bilingual education offers possibilities to express cultural identity and to take part in cultural activities (p. 69).

It is important to note that the goal of the official Swedish home language teaching policy is not primarily to facilitate or encourage the return of immigrants to the country of origin (as has been alleged in the case of Bavaria), but to provide a strong foundation for academic and personal growth with resulting full participation in Swedish society.

It is clear that many approaches to the teaching of minority students exist in Europe. Although some provision for L1 instruction is generally considered desirable in most countries, debate continues as to the most appropriate and feasible means of implementing this provision. The results of research carried out in Sweden since the mid-seventies and of evaluations of pilot projects funded subsequent to the EEC directive in 1977 have begun in recent years to play a role in the policy-making process. This research is considered below, organized according to country. Unless otherwise specified, the primary goals of programs for recently-arrived minority groups are "transitional" in nature, whereas those for indigenous minorities usually incorporate "enrichment" goals.

PROGRAM EVALUATIONS

Although several pilot projects were implemented in EEC countries with the aim of establishing models for more large-scale implementation of L1 instruction for minority students, the evaluations of some of these projects do not provide results which are useful outside of the specific context of implementation. In some cases this is because the evaluation was based primarily on questionnaire data (e.g., École Normale Supérieure de Saint Cloud, 1978; Tosi, 1981), in others because the overall evaluation design is not clear from the research report (e.g., Provincial Service for the Reception of Migrant Workers, Belgium, 1977). Thus, the present review focuses on relatively well-designed evaluations of programs for (im)migrant students in Britain, Holland, and Sweden, as well as programs for indigenous minorities in Friesland (Holland) and Wales.

A. PROGRAMS INTENDED FOR (IM)MIGRANT MINORITIES

1. Britain: The Bradford Project (Rees, 1981)

The Bradford Mother Tongue and English Teaching (MOTET) Project consisted of a one-year bilingual education program for 5-year-old native speakers of Punjabi who, at the start of the project, had little or no knowledge of English. Approximately seventy students were randomly assigned to either experimental (bilingual) or control (monolingual English) groups, and their performance on non-verbal tasks and both English and Punjabi verbal tasks was assessed after one academic year (July 1979).

No group differences were observed on the non-verbal ability measures. On the verbal tasks, the bilingual group tended to perform better in Punjabi than the control group, while performance in English was, on balance, equivalent (the control group showed a slight superiority on the productive task while the bilingual group performed better on the receptive tasks). Rees (1981) concludes cautiously that

> Provision of a bilingual education programme in the first year at school does not in practice necessarily constitute a danger to a child's progress. In the areas examined here progress is as good as that in monolingual conditions on balance. Given that there are institutional and personal benefits and a positive effect on the mother tongue, the provision of a bilingual education programme might be beneficial for some young Asian children (p. 74).

It is worth noting that this evaluation is exceptionally well-designed in that students were randomly assigned to experimental and control treatments and a variety of L1- and L2-dependent measures are employed.

Tosi (1981) reports that the MOTET project demonstrates that "in Authorities with large settlements of the same ethnic group, mother tongue teaching can be provided within the normal resources existing in schools" (p. 61). This contrasts with Tosi's own Bedford project for Punjabi- and Italian-speaking students which cost £150 000 over four years to teach 150 children on a pull-out basis. This adds to the U.S. and Canadian (Lapkin and Cummins, in press) evidence that pull-out (or "add-on") teaching of additional languages is considerably more expensive than bilingual teaching because of the extra personnel costs involved.

The Bradford MOTET project is following up the students into the early grades of elementary school in order to investigate the long-term impact of the transitional bilingual program. Other projects are also in operation in Britain (e.g., Schools Council projects involving Bengali and Greek), but the overall picture in Britain is of a lack of both understanding and enthusiasm for heritage language teaching.

2. Holland: Bilingual Programs for Turkish and Moroccan Students (Altena and Appel, 1982)

Altena and Appel (1982) investigated the Dutch language proficiency of two groups of Turkish and Moroccan immigrant workers' children (N=57 in total) after eight months' experience within two different school models. The first school model was an experimental program in which Turkish or Moroccan Arabic was the main initial language of instruction, while the second model was the normal program in which Dutch was the main (or sometimes only) language of instruction. The children in the experimental program were all at one school, whereas those in the normal program were at six different schools, none of which, in fact, operated the same program for foreign students. Altena and Appel (1982) point out that there is no single type of normal school program for foreign students in Holland in that individual schools vary in the relative amounts of time devoted to the "regular" curriculum, to Dutch as a second language, and, in many cases, to instruction in the native language and culture.

The experimental program was designed and implemented (in Leiden, October 1977) as a two-year program in which, in the initial year, 6- to 12-year-old students received all instruction through the medium of L1 with the exception of one hour of Dutch per day. In the second year the percentage of L1-medium instruction dropped to 40 per cent while in the third year of the evaluation students received instruction in L1 as a subject for 10 per cent of the time in the regular school program.

A variety of Dutch language proficiency indices were derived from interviews with the students. These measures (scored from transcripts rather than by ratings) were primarily syntactical in nature. In the second and third years of the project cloze tests were administered to assess academic Dutch proficiency.

In the first-year evaluation no differences were found between experimental and normal programs in terms of oral Dutch acquisition despite the considerably greater amount of Dutch-medium instruction received by the "normal school program" students and their somewhat longer length of residence (8.3 months v. 7.5 months). Appel (1978) concludes that "a school model with the native language of the children as the main medium of instruction does not have negative consequences for the acquisition of a second language (in this case Dutch) after one school year" (p. 11).

At the end of the second school year, the students in the bilingual program performed better on eight out of twelve measures of oral Dutch proficiency, and these differences were statistically significant for three variables. The bilingual program students performed better on all ten oral variables at the end of the third year (i.e., in the regular school program), and on one of these the difference was statistically significant. A significant difference was also observed on the written cloze test in favour of the experimental bilingual program students.

Altena and Appel (1982) conclude that

> ... the amount of time spent in mother tongue teaching in the transitional bilingual school did not harm or hinder the second-language acquisition of the Turkish and Moroccan immigrant workers' children. These children were even somewhat ahead in oral and written second-language proficiency as compared to children who were instructed almost entirely in Dutch (p. 321).

Although random assignment of students to treatment groups was not carried out in this evaluation, students in experimental and control groups were generally similar in terms of background characteristics, and there is little reason to suspect pre-program differences between the groups. The lack of any differences in the first year supports this conclusion, while the significant differences in the second and third years suggest some beneficial effect of the bilingual program on acquisition of L2 oral and written skills.

3. Sweden: Achievement of Finnish Immigrants in Bilingual Programs

Considerable research has been carried out in Sweden on the academic achievement of immigrant students, particularly Finnish students who form by far the largest minority group. The extremely poor achievement of Finnish students in both Finnish and Swedish has been documented in several studies (see Skutnabb-Kangas and Toukomaa, 1976, for a review) and, as indicated earlier, L1-medium classes were instituted to address this problem. A recent survey of teachers in these classes (Enström, Kallström and Tingbjörn, 1982) concluded that

> By and large ... positive experience predominates. The general consensus appears to be that home language classes are needed, and that in this way the schooling of the pupils concerned can be made as "normal" as possible in a foreign country (p. 29).

Three sets of program evaluation data are considered: the first derives from the extremely influential (at least in Europe and the United States) report of Skutnabb-Kangas and Toukomaa (1976), the second from the evaluation of a home language or "language shelter" (Skutnabb-Kangas, 1979) program (Hanson, 1979), and the third from the evaluation of a "composite" program (Löfgren and Ouvinen-Birgerstam, 1982).

(a) The Skutnabb-Kangas and Toukomaa (1976) Report

The data reported in the Skutnabb-Kangas and Toukomaa (1976) report and in a subsequent paper by Skutnabb-Kangas (1979) derived from empirical studies conducted by Toukomaa and other researchers in Sweden in the early 1970s. In general, these studies were designed to determine the level of Finnish students' academic achievement in both Finnish and Swedish and to explore some of the determinants of achievement. A variety of tests in both languages were used; most assessed cognitive/academic proficiencies such as vocabulary knowledge, synonyms, antonyms, etc., as well as academic achievement in reading, math, and other school subjects.

Data relevant to bilingual instruction are summarized in Tables 3 and 4. These data were collected for Finnish minority students in Gothenburg in Grades 3 to 6 by Jauho and Loikkanen (1974). The following quotation from Skutnabb-Kangas and Toukomaa (1976) explains the meaning of the scores in Tables 3 and 4.

> A test average of 1 means that the pupils cannot manage even the simplest Swedish-language tasks and the highest point average 5 that the pupil has the normal Swedish-language skills of his Swedish peers as far as reading simple daily language goes (see Ekstrand 1973). A pupil with the average 3 already needs remedial Swedish instruction. The table combines the two lowest and two highest values.
>
> According to the table 3, those who attended school in Finland approached the level of achievement of normal Swedish pupils (4 or 5) in the written comprehension test considerably more often than those who began school in Sweden. Those who had attended school in Finland for at least three years did best. The explanation for this can perhaps be found in their better skill in their mother tongue, which laid the basis for understanding a test written in Swedish. Two years in a Finnish class in Sweden did not, on the other hand, make for as good a basis for learning Swedish as the corresponding time in Finland (pp. 65-66).

The results for listening comprehension presented in Table 4 appear to show somewhat more optimistic trends in terms of the efficacy of Finnish classes and less optimistic results for Swedish classes. It is not clear, however, what the relationship is between Group 1 in Table 4 and the students who attended school only in Sweden in Table 3--for example, whether the Table 4 data also derive from the Jauho and Loikkanen (1974) study or whether more subjects were added at a later date.

Skutnabb-Kangas and Toukomaa (1976) interpret the better performance of the students instructed in Finland as evidence that a strong basis in L1 is important for subsequent academic achievement in L2. There is other evidence to support this hypothesis (reviewed in Cummins, 1981b). However, the issue here concerns the efficacy of bilingual instruction (i.e., Finnish classes) in Sweden, and the data are inconclusive in this regard. Insufficient information is provided in the research reports to interpret the discrepancy between listening comprehension and reading comprehension results. However, in reading comprehension the performance of students in Finnish-language classes is, on balance, similar to that of students in Swedish-language classes. This supports the findings of all other evaluations reviewed that minority students receiving L1-medium instruction for part or all of the time perform as well in L2 as students taught entirely in that language. It is not possible on the basis of the present data however to make any strong claims about superior performance for bilingually-schooled minority students.

Table 3

Results of Reading Comprehension (Swedish) Tests According to Location of Schooling (Jauho and Loikkanen, 1974)

Test Average	Attended school only in Sweden		Attended school in Finland	
	Swedish-lang. classes	Finnish-lang. classes	1-2 yrs	3 yrs of more
1-2	12	5	14	6
3	26	40	11	12
4-5	62	55	75	82
	100%	100%	100%	100%
N	65	40	28	17

Source: Skutnabb-Kangas and Toukomaa (1976), Table 13, p. 65.

Table 4

Results of Listening Comprehension (Swedish) Tests According to Language of School Entry

		Group 1 Started school in Sweden		Group 2 Started school in Finland	
				School years in Finland before emigration:	
Test Average	%	Swedish classes	Finnish classes	1-2 yrs	3 yrs or more
1-2		12	4	14	12
3		50	33	17	12
4-5		38	63	69	76
		100%	100%	100%	100%
N		82	49	29	17

Source: Skutnabb-Kangas (1979), Table 7, p. 16.

(b) The Södertälje Project (Hanson, 1979)

This program, which was started in 1972/73, used Finnish as the major initial language of instruction and continued its use throughout elementary school, although Swedish became the major language of instruction from Grade 3 onwards. By Grade 6, children's performance in this program in both Finnish and Swedish was reported to be almost at the same level as that of Swedish-speaking children in Finland, which was interpreted as a considerable improvement in both languages compared with the usual performance of Finnish students in Swedish-only programs (see Hanson, 1979; see Skutnabb-Kangas, 1981a).

Hanson (1979) reports that the students became active bilinguals, able to switch languages easily, and had positive attitudes towards both school and their own Finnish identity. Parents were also reported to be highly satisfied with the program and especially with the fact that it was possible to discuss important child-parent problems with their children in the mother tongue. The rapid replacement of L1 in Swedish-only classes has been found to result in severe communication problems among many Finnish minority families (see Skutnabb-Kangas, 1981). One indication of the impact of the program is that an additional thirty-one Finnish home language classes were formed in the town at the request of the parents, and these classes are now very common in Finnish communities in Sweden.

Hanson (1979) qualifies the positive results by noting that about 20 per cent of the students did not show the same high level of achievement, the reason being that some (10 per cent) did not concentrate sufficiently on their school work, while the remaining 10 per cent had problems in reading and writing.

It is difficult to evaluate the quantitative aspects of this evaluation since only sketchy details are provided by Hanson (1979) and the appropriateness of the comparison group of Swedish-L1 students in Finland is unclear. Also, the comparison of only 80 per cent of the project sample (excluding those with low academic motivation and learning problems) with presumably 100 per cent of the Swedish-L1 group is clearly a questionable procedure. Ekstrand (in press), in fact, has claimed that Hanson's empirical claims are totally unsubstantiated. However, the qualitative details provided by Hanson suggest a program which is working well and which has had a significant impact on the Finnish community in the town. The controversial nature of the evaluation suggests that it should be interpreted cautiously at this time.

This issue of "ghettoization" as a result of home language classes such as the Södertälje project has also been of concern in Sweden, and this issue is briefly addressed by Jakobsson (1981) from the perspective of the Swedish National Board of Education:

> Segregational difficulties can occur but can be mastered by locating home language classes in schools where there are also other classes. All children will thus join in using the common resources available and join in certain activities together which emphasize that they all "belong" to the school (p. 68).

(c) The Lund Composite Bilingual Program (Löfgren and Ouvinen-Birgerstam, 1982)

The evaluation of this experimental bilingual program for Finnish-speaking students in Malmö was conducted between 1972 and 1980 at the Institute of Education in Lund. The instructional model consisted of a two-year mainly Finnish pre-school program followed by instruction in both Finnish and Swedish from Grades 1 to 3 with transition to regular Swedish classes at Grade 4. The proportion of time in each language went from equal amounts in Grade 1 to twice as much Swedish as Finnish in Grade 3. In the elementary school (Grades 1-3), Finnish students were integrated in classes with Swedish students who received essentially the same monolingual instruction as Swedish students in other classes. The Finnish students were introduced to literacy in Finnish. No extra teacher resources were needed for the project since different Finnish classes were combined for Finnish-medium instruction.

Although the Grade 3 Finnish students performed roughly one standard deviation below national norms in both Finnish and Swedish academic language skills, their performance in all academic subjects except Swedish was similar to that of their Swedish-L1 classmates. In Swedish, the Swedish-L1 students obtained a score of 2.3 (national norm is 3.0), compared with 1.9 for the Finnish students. The researchers attribute the generally low scores of all students in the project schools to their low socio-economic background. They point out that the Finnish students appeared to be developing Finnish proficiency more adequately than similar immigrant students in Swedish-only classes and suggest that their low level of performance in Finnish in relation to Finnish norms is misleading because of their lower socio-economic background than the norming group. Löfgren and Ouvinen-Birgerstram (1982) conclude as follows:

> After having followed the progress of the four groups of Finnish children through the project instructional model for four years, we have found that the model works well in the practical context and that it has enhanced the prospects of the Finnish pupils becoming functionally bilingual (p. 329).

The lack of an adequate control group makes it difficult to evaluate the success of the program, but it does appear to have been at least moderately successful. Certainly, there is no indication that students developed any less Swedish proficiency as a result of reduced time in Swedish-medium instruction, but it is not clear that they necessarily experienced any greater success in learning Swedish than they might have done in regular Swedish classes. Although few details are given in the report, the composite model appears somewhat cumbersome and potentially difficult to implement and administer.

(B) PROGRAMS INTENDED FOR INDIGENOUS MINORITIES

The Friesland Project (Wijnstra, 1980a))

Wijnstra (1980a) compared the academic achievement of elementary school students in three different schooling models in Friesland, a region of Holland. Model A involved Frisian as the main medium of instruction from K to Grade 2, after which it was taught as a subject; model B used Frisian predominantly in Kindergarten, after which Dutch was used exclusively; while model C was monolingual Dutch from K to Grade 6. These three groups were also compared with a group of Dutch-L1 students from a rural region near Utrecht. All the

Frisian students had Frisian as L1 and the schools were in relatively homogenous Frisian areas.

The sample consisted of about 250 students who entered primary school in 1972. These students were followed longitudinally from K to Grade 3. The dependent variables consisted of intelligence and Dutch oral proficiency and achievement tests.

No group differences were found on intelligence measures either in Kindergarten or in subsequent grades. On the Dutch language proficiency and achievement measures the Frisian students performed significantly more poorly than the Utrecht group in K and Grade 1, but by Grade 3 group differences were negligible. In other words, students whose instruction from K through Grade 2 was predominantly in Frisian (L1) were doing as well in Dutch (L2) by Grade 3 as students whose instruction was predominantly through the medium of Dutch (models A v. C). Both of these groups were performing as well in Dutch academic skills as students whose L1 was Dutch. In oral Dutch some differences were found between the Frisian and Utrecht children. However, the deviations from standard Dutch (roughly 12 per 1000 words) were minor and did not interfere with comprehensibility. The only subject in which the Grade 3 Frisian groups performed more poorly than the Utrecht sample was arithmetic.

The achievement of Grade 6 students was also investigated with two separate samples drawn from the same school models as the original longitudinal study. The first Grade 6 sample was tested in 1974/75, while the second sample consisted of the original longitudinal groups who had entered school in 1972. The findings for both Grade 6 comparisons parallel the Grade 3 results. No group differences were found in the language measures, but the Frisian students performed more poorly in arithmetic. Wijnstra (1980a) suggests that more time may have been devoted to arithmetic in the Utrecht program than in the Frisian programs.

Wijnstra concludes that "linguistic background and schooling model have a minimal influence on school success" (1980a, p.54), although he also points out that "pupils of bilingual schools ... have had more chance of learning to read and write Frisian, which is a considerable contribution to the preservation of the Frisian language" (1980a, p.53). The findings are very similar to those obtained in studies involving Canadian Francophone minority students in that instructional time in the minority language (i.e., Frisian or French) bears little relationship to achievement in the majority language.

Other bilingual programs for indigenous minorities exist in Europe (e.g., in Wales, Ireland, and Scotland as well as in Scandianavian countries), but no formal evaluations have been carried out to assess the impact of these programs on minority language students. Research carried out on the development of bilingualism and academic skills in these situations, however, is consistent with the trends that have emerged in the studies reviewed about (see, e.g., Cummins, 1977, 1978; Wijnstra, 1980b) in showing little relationship between school exposure to the majority language and achievement in that language. Wijnstra (1980b), for example, reanalysed data on the achievement of children in Wales and concluded that the pattern of results was similar to that which he had observed in Friesland in that "attainment in a second (national) language is not or only slightly affected by the children's home language and the schooling model" (p.72).

CONCLUSIONS

There is almost a sense of déjà vu in relation to the European program evaluation data because the trends are so similar to those that emerged in the Canadian and U.S. contexts. The evaluations clearly show that minority students instructed bilingually (i.e., with less time in L2-medium instruction) develop academic skills in the majority language which are as adequate as those of similar students taught entirely in the majority language. Thus, any benefits that accrue to children's L1 skills are achieved at no cost to L2 development. One longitudinal evaluation suggests that a bilingual program may facilitate im(migrant) students' academic development (Altena and Appel, 1982). The other program evaluations that were reviewed do not permit strong conclusions in this regard, the Swedish evaluations because of design limitations (e.g., no control group) and the exceptionally well-designed Bradford project (Rees, 1981) because of the fact that data for only one academic year (5-year-olds) have been reported.

Thus, the general conclusions from the European data are that bilingual programs will not in any way impede children's acquisition of L2 academic skills and may, in some cases, facilitate this process as well as promoting children's knowledge of their L1.

In regard to more general effects of heritage language programs, the European data are extremely sketchy. It appears that bilingual programs can be implemented with considerably less extra cost than add-on (i.e., heritage language taught as a subject) programs (Tosi, 1981), and there is a suggestion that although potential problems of segregation may exist with home language classes in Sweden (with most elementary instructional time through the medium of L1), these problems are not insurmountable (Jakobsson, 1981).

V Theoretical Integration

In most countries public debate on the desirability or otherwise of heritage language programs has been both volatile and ill-informed with respect to the educational research findings. Assumptions and conventional wisdoms rather than information have predominated. A common objection to such programs (and one sometimes believed by minority parents) is that spending time in L1 will impede students' acquisition of L2, the majority language. This assumption is clearly refuted by virtually all the evaluation results reviewed in the preceding chapters.

At the other extreme, some advocates of bilingual programs for minority students (especially in the United States) have argued that the academic failure of many such students is caused by mismatch between the language of home and school; in other words, the assumption is that exclusive L2-only instruction leads to academic retardation for minority students. This "linguistic mismatch" hypothesis is also refuted by considerable research data. Perhaps the most obvious example is the success of immersion programs for majority students in Canada and the United States. Also, it is clear that in many of the bilingual programs reviewed above (e.g. Egyed, 1973; Rees, 1981), minority students did not surpass similar students in L2-only programs in the development of L2 academic skills. The fact that in some cases the bilingually-schooled students did perform better does not alter the fact that the linguistic mismatch hypothesis is inadequate both as a theoretical generalization and as a basis for policy decisions.

One theoretical principle, however, does emerge clearly from the results of bilingual program evaluations and provides at least a partial basis for policy decisions in the area of heritage language education. This principle has been termed the "interdependence" hypothesis.

THE INTERDEPENDENCE HYPOTHESIS

The fact that there is little relationship between the amount of instruction received through the medium of the majority language and academic achievement in that language strongly suggests that L1 and L2 academic skills are interdependent, i.e., manifestations of a common underlying proficiency. The interdependence hypothesis has been stated formally as follows (Cummins, 1980, 1981b).

> To the extent that instruction in Lx is effective in promoting proficiency in Lx, transfer of this proficiency to Ly will occur provided there is adequate exposure to Ly (either in school or environment) and adequate motivation to learn Ly.

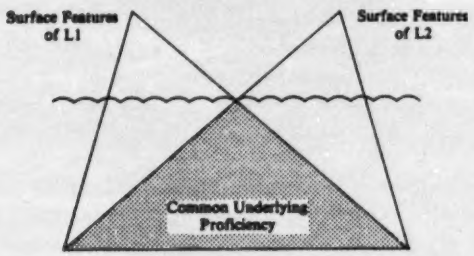
In concrete terms what this hypothesis means is that in, for example, a Ukrainian-English bilingual program, instruction that develops Ukrainian reading skills is not just developing Ukrainian skills, it is also developing a deeper conceptual and linguistic proficiency which is strongly related to the development of English literacy and general

academic skills. In other words, although the surface aspects (e.g., pronunciation, fluency, etc.) of, for example, Ukrainian and English or French and English are clearly separate, there is an underlying cognitive/academic proficiency which is common across languages. This "common underlying proficiency" makes possible the transfer of cognitive/academic or literacy-related skills across languages. This model of bilingual proficiency is illustrated in Figure 1 (see also Cummins, 1980, 1981b).

What are some of the literacy-related skills involved in the common underlying proficiency? Conceptual knowledge is perhaps the most obvious example. An immigrant child who arrives in North America at, for example, age 15, understanding the concept of "justice" in his or her L1, only has to acquire a new label in L2 for an already-existing concept. A child, on the other hand, who does not understand the meaning of this term in his or her L1 has a very different, and more difficult, task to acquire the concept in L2. By the same token, subject matter knowledge, thinking skills, reading strategies, etc. developed through the medium of L1 transfer or become available to L2 given sufficient exposure to that language.

Figure 1

THE "DUAL-ICEBERG" REPRESENTATION OF BILINGUAL PROFICIENCY



Common experience also indicates the existence of some form of common underlying proficiency. For example, as John Macnamara (1970) has pointed out, if L1 and L2 proficiencies were separate (i.e., if there were not a common underlying proficiency), this would leave the bilingual individual in a curious predicament in that "he would have great difficulty in 'communicating' with himself. Whenever he switched languages he would have difficulty in explaining in L2 what he had heard or said in L1" (pp. 25-26).

The point is a very obvious one but its implications have not generally been realized in the policy debates on heritage language education. In terms of Figure 1, minority students' academic achievement in L2 is directly related to how well their common underlying proficiency is developed. However, those who argue that L1 instruction will impede L2 (e.g., English) acquisition fail to realize that experience or instruction in either language can promote development of the proficiency underlying both languages, given adequate motivation and exposure to both in either school or the wider environment.

The interdependence hypothesis explains why students in bilingual education programs acquire academic skills in the majority language which are at least as well-developed as those of students in monolingual programs, despite much less instructional time in the majority language. However, in order to assess further the theoretical adequacy of this hypothesis, one must ask (1) to what extent it can account for research findings related to other bilingual learning situations, and (2) to what extent it can explain bilingual program results in other contexts.

With regard to the first question, the interdependence hypothesis can account for research findings relating to the issues of (a) age and L2 acquisition, (b) L1 development in minority language homes, (c) the relationship between L1 and L2 academic skills, and (d) information processing in L1 and L2 (see Cummins, 1981b, for a review). With regard to the generalizability of the hypothesis to other bilingual education contexts, as indicated earlier, the same principle of transfer or interdependence underlies the success of immersion programs for majority students. The results of two very different program evaluations will briefly further demonstrate the generalizability of this hypothesis.

The Milingimbi Aboriginal Program (Gale et al., 1981)

Australian aboriginal students who had been educated bilingually (spending overall roughly half the time in L1-medium instruction, K-Grade 6) were compared in Grades 4-6 with the previous cohort of Grade 4-6 students in the same school who had received monolingual English instruction. The results of this evaluation are summarized by Gale et al. (1981):

> Since the introduction of bilingual education at Milingimbi, the children are not only learning to read and write in their own language and furthering their knowledge and respect for their own culture, but they are also achieving better academic results in oral English, reading, English composition and mathematics than they were under the former English monolingual education system (p.309).

The advantage of the bilingually-schooled students at the end of elementary school was greater in the more cognitively-demanding higher-level literacy (e.g., cloze and writing) and mathematics (multiplication and division) skills than in lower-level skills which may

depend more on rote learning (e.g., decoding, sight words, addition, subtraction). The authors point out, however, that despite their improved performance, the students were still considerably below national norms in achievement.

A variety of factors (in addition to bilingual instruction per se) may combine to produce such encouraging results. However, for present purposes it is sufficient to note that transfer of academic knowledge and skills across language has clearly occured and students have in no way suffered in English as a result of spending considerably less time in English-medium instruction.

Africaans-English Bilingual Education (Malherbe, 1946)

In 1938, E. G. Malherbe conducted a survey of almost 19 000 South African students from Africaans and English backgrounds in different types of school program. The results were published in 1946 in his book entitled The Bilingual School. The aim of the study was to compare the effects of teaching children from each language background in bilingual as opposed to monolingual schools. In the bilingual schools children generally received their instruction in the early grades in L1, and thereafter in both languages. Both intelligence level and home language were kept constant in comparisons of the effects of these two types of school.

Briefly, the findings of the study were that students from both language backgrounds experienced no long-term loss in L1 academic skills as a result of bilingual instruction. Bilingual instruction appeared to be especially appropriate for students of below-average IQ. Again, a common underlying proficiency allowing transfer of academic and conceptual skills across languages must be invoked to account for these data.

In conclusion, considerable confidence can be placed in the validity of the interdependence hypothesis as a general theoretical principle underlying bilingual instruction for both minority anad majority students.

OTHER THEORETICAL IMPLICATIONS OF THE RESEARCH FINDINGS

Although the research findings are consistent with several other hypotheses or assumptions in regard to the effects of heritage language education, strong generalizations across contexts (such as that involved in the interdependence hypothesis) are not possible. For example, while it is clear that for groups of minority students who traditionally have experienced school failure, bilingual instruction can improve (and in some cases dramatically improve) academic performance, it is equally clear that this is not always the case. This variation in results may be due to a variety of factors (e.g., poorly implemented program, inferior bilingual program model, etc.), but it appears most likely that L1-medium instruction is only one of a number of factors that influence academic outcomes for minority students. Community, curricular, and administrative variables are probably at least as important as specifically linguistic variables. Although one can speculate on the nature of these interactions, there does not yet exist a firm empirical basis for policy decisions.

In short, the data are consistent with the hypothesis that some forms of bilingual or L1 instruction can enhance minority students' academic development, but not with the hypothesis that bilingual instruction does (universally) enhance academic development. In relation to the issue of which forms of bilingual program appear most successful in facilitating students' academic progress, there appears to be a tendency for more L1-intensive (either short-term or long-term) programs to produce the greater gains among low-achieving students (e.g., Altena and Appel, 1982; Carpenteria United School District, 1982; Evaluation Associates, 1978; Gale et al., 1981; Legaretta, 1979; Rosier and Holm, 1980).

A factor that emerges as both a consequence of heritage language programs and a potentially important influence on students' academic progress is parental and community involvement. Several of the Canadian program evaluations, for example, noted increased parental participation in their children's schooling as a result of the fact that their L1 was represented in the school program. However, this increased involvement may be short-lived in the case of a transitional program where L1 instruction is rapidly phased out. In general, however, the issue of community involvement has not been investigated systematically in a sufficient number of evaluations to draw strong conclusions about the conditions under which heritage language instruction increases minority parent involvement and the specific effects this might have on students' academic progress. The general assumption among most educators and researchers, however, is that minority community participation is highly desirable and will be increased as a result of heritage language programs. This latter hypothesis is consistent with the available data (e.g., Henderson, 1977; Shapson and Purbhoo, 1977).

A final issue concerns cost. Again, this issue has not been extensively investigated, but the available data from several contexts suggest that bilingual programs are considerably cheaper than add-on programs of heritage language instruction. This conclusion is obviously subject to some qualifacations; for example, bilingual programs are unlikely to be less expensive if few teachers capable of teaching bilingually are available and extensive training is necessary. However, the general finding parallels the French immersion experience in which a 50 per cent French, 50 per cent English program has been reported to be the least costly means of teaching French, while traditional core FSL programs are the most costly (see Lapkin and Cummins, in press).

In summary, the research data strongly support the interdependence hypothesis and are also consistent with the hypotheses that bilingual instruction can (but does not necessarily) facilitate minority students' L2 academic progress and lead to greater parental awareness and involvement in their children's education.

VI Policy Implications

The major policy implications of the research and theory that have been reviewed are that there appear to be no educational impediments (in terms of student achievement) to implementation of bilingual minority language programs, and that such programs may facilitate the school progress of minority students who potentially face academic problems. These general implications, however, become meaningful only in the context of a number of other considerations--for example, Who are the "client groups" for heritage language programs and why do they want or need such programs? What are the objectives of the programs? What means are potentially available for achieving these objectives? And finally, What are the broader societal ramifications of particular program options? No attempt will be made here to answer these questions in any detail; rather, I will sketch some ways in which the policy issues might be considered in relation to the research literature.

Clearly, there is enormous diversity in the potential "client groups" for heritage language instruction in terms of ethnic background, educational or socio-economic level, and many other variables. However, for present purposes, it is sufficient to distinguish between minority students who are academically "at risk" and those whose academic prospects appear similar to students from English home backgrounds. For example, students in the Ukrainian-English bilingual programs in western Canada would fall into the latter category, whereas many Canadian Native Indian students (as well as, for example, Mexican-American students in the U.S. and migrant students in Europe) would clearly fit the "at risk" category.

The policy options for each of these two broad groups will be considered separately, although it is important to note that some students or minority groups may not fall neatly into just one of these two categories.

POLICY OPTIONS FOR HERITAGE LANGUAGE ENRICHMENT

The usual goals of heritage language programs intended for students who are not academically at risk include heritage language promotion (either maintenance or acquisition) and the strengthening of students' appreciation or identification with the heritage culture and possible religion. More general educational goals (e.g., personal benefits of bilingualism) and/or instrumental goals (e.g., better job prospects) may also be relevant in some cases.

Based on the literature that has been reviewed, as well as the French immersion and core FSL literature (e.g., Swain and Lapkin, 1982), there is no question that, in principle, these goals can be achieved more adequately in a bilingual program than in a program where the heritage language is taught as a subject. This is not only because more time is available but because the heritage language can be used as a living, meaningful language to communicate content.

The research data also suggest very strongly that a well-implemented bilingual program would have no adverse effects on the development of English academic skills. This statement is based on the fact that in none of the evaluations reviewed was any such adverse effect noted. There was evidence, in fact, of the opposite--enrichment of L2 academic skills (e.g., Edmonton Public Schools, 1980).

From the point of view of student achievement in L2, there appear to be few constraints in terms of the amount of instructional time devoted to the heritage language (50 to 80 per cent appears reasonable in the light of Ukrainian and Francophone data) or in terms of the extension of the program (across grade levels). Other factors (e.g., community wishes, administrative constraints, etc.) would presumbly determine any such decision.

There appears to be little reason to expect that provision of a bilingual program would adversely affect the provision of FSL instruction or French-medium instruction (i.e., trilingual programs). There is research evidence that bilingual students are more adept at acquiring additional languages than are monolingual students (see Cummins, 1981c, for a review). Clearly, however, the administrative aspects of providing effective French instruction at some point in the students' program should be an integral consideration if any such heritage language bilingual program were planned.

Finally, given the educational viability of bilingual programs and their demonstrated effectiveness in achieving language and cultural maintenance goals, one must ask, What are the broader community and societal implications of such bilingual options? Is there any ethnic community demand for such programs and would they be acceptable to the Ontario community as a whole? There is reason to believe that with the exception of one or two ethnic groups in Ontario (e.g., Ukrainians) there is at present relatively little ethnic community demand for enrichment bilingual programs. It was certainly not a dominant theme in the submissions made to the Toronto Board of Education in April and May 1982 in relation to heritage language provision. Most groups appear content with some form of the present Heritage Languages Program. As further support for this supposition, it is interesting to note that in western Canada, almost a decade after the start of the Ukrainian-English program, only German and Jewish ethnic groups have instituted similar programs, and only on a very small scale. Thus although the situation in, for example, Metropolitan Toronto is clearly very different from that in western Canada, a relatively modest enrolment in such an enrichment bilingual program might be expected.

Given the experience of previous debates in Metropolitan Toronto regarding heritage language programs, acceptance of any new initiatives by some sections of the general public is unlikely; the major objections would probably relate to alleged "ghettoization" and cost. The small-scale nature of any pilot scheme, together with its probable location in an already high target group density area, might alleviate the first concern, while the fact that the operational costs of such bilingual programs are less expensive than is the case with the present Heritage Languages Program might answer the second objection.*

* Clearly, in a pilot scheme, implementation and evaluation costs are present and thus, on a short-term basis, costs would be higher than those of the present heritage language provision.

In summary, although there are compelling educational arguments for enrichment bilingual programs whose primary goals are linguistic and cultural, the community and societal ramifications of implementing such programs are as yet unclear. However, the sketchy documentation of these broader aspects of program implementation available in the research literature suggest no obvious impediment.

POLICY OPTIONS FOR MINORITY STUDENTS ACADEMICALLY AT RISK

The issue here is not whether such students should be provided opportunities to develop their L1 and gain more appreciation of their home culture. Provincial policy (as incorporated in, for example, the Heritage Languages Program) explicitly endorses these goals for all students, and the research findings reviewed suggest that these goals are entirely appropriate from a general academic perspective. The issue is rather whether there are heritage language program options (e.g., transition programs) which might in fact alleviate minority students' potential academic problems.

Before this question can be answered, several others need to be considered. First, and most obviously, To what extent are minority language students academically at risk in Ontario? What provision is presently in existence for identifying the nature of minority students' academic difficulties and helping them to achieve academically? How successful and/or appropriate in light of the research evidence are present programs? And finially, Does the research literature reviewed in the present report suggest potentially more appropriate options?

Little research documentation is available on the current academic performance of minority students in Ontario. Although surveys carried out on secondary school students in the sixties and early seventies (see Cummins, 1981c, for a review) suggested that students born in Canada who had learned English as a second language were achieving at least as well as monolingual English-background students, there are strong indications from the informal observations of teachers, administrators, and minority parents, as well as from test data in some Metropolitan Toronto boards (e.g., Feeney and Hartmann, 1977), that the current situation may be different. Students from a number of language backgrounds born in Canada are perceived to be experiencing academic difficulties. However, the absence of comprehensive published research data makes it difficult to assess either the dimensions of this problem or possible causes. There are also no research data (apart from the survey conducted by the MSSB [Keyser and Brown, 1981]) on the potential impact the present Heritage Languages Program might have on the academic development of minority students who are experiencing difficulties.

The question of possible academic difficulties among minority students raises the issue of what procedures might be appropriate to identify minority students' learning needs and abilities, and how these provisions might relate to those being implemented across the province in the context of Bill 82. The Ontario Ministry of Education has recently (Policy/Program Memorandum, No. 59) emphasized that:

> The administration and interpretation of the [psychological] assessment must be made carefully, recognizing the impact of the pupil's culture and language facility on the results of the assessment... If the pupil's first language is other than English or French and/or the pupil lacks facility in either of these languages, consideration should be given to postponing the assessment or, where possible, conducting the assessment in the child's first language (p. 2).

Except in one or two school boards in the province (e.g., North York Board of Education), there is little evidence that minority students' L1 background is systematically taken into account in early identification and assessment procedures (Cummins, in press; Samuda and Crawford, 1980), despite the fact that in some boards the majority of students referred for more detailed psychological and educational assessment are likely to come from non-English-speaking backgrounds. Clearly, research is required to assess the ramifications of this situation. An immediate policy option that might be explored, however, is to allow some heritage language instructors a role in the assessment process. Minimally this might involve informal observation of the minority child's language and academic facility in L1, to be taken into account by the psychologist in identifying the child's learning abilities and needs; or, for larger ethnolinguistic groups. special L1 assessment procedures might be developed (as has been done in the North York Board) to be administered by trained speakers of the child's L1 as a means of complementing the assessment procedures in English and providing a more complete picture of the child's abilities.

The general point is that speakers of the minority child's L1, who are also familiar with his/her cultural background (e.g., heritage language instructors), are potentially valuable resource people whose linguistic/cultural skills and insights have not been effectively utilized to this point in the psychological and educational assessment process. Clearly, adequate training of such resource people would be a prerequsite to any involvement in student assessment.

Because of the lack of research data on the current academic needs of minority students in Ontario and on the degree to which the present Heritage Languages program is actually addressing these (unidentified) needs, one can only speculate on the appropriateness of possible bilingual or add-on alternatives. The transition programs implemented in Toronto in the seventies appear to have met their objectives very adequately (Henderson, 1977; Shapson and Purbhoo, 1977), but both pilot schemes were small-scale and students' subsequent academic progress was not followed up. Thus, they provide only limited possibilities for generalization.

If a substantial number of students from some minority groups were found to have severe academic problems, it would seem logical to examine the interaction between the skills and abilities children bring to school and the initial educational provision they experience. In this regard, the impressive findings of the Carpenteria Unified School District (1982) intensive L1 kindergarten program might be worth considering as a model for a pilot scheme.

Considerable research and theory (Cummins, 1979; Skutnabb-Kangas and Toukomaa, 1976; Swain, 1981) has emphasized the role of well-developed L1 cognitive/academic skills in providing a foundation for academic development in L2. This is the theoretical principle upon which the Carpenteria program (and several others) is based and it implies a very

different approach from either a transition program (no promotion of L1) or the present Heritage Languages Program (insufficient time devoted to L1 promotion, at least in the early grades). Clearly other program possibilities also exist. However, until the dimensions of the issue are clarified there is little possibility of rational planning, i.e., of considering program options in relation to identified needs.

In summary, although the present Heritage Languages Program (at least as implemented in the MSSB [Keyser andd Brown, 1981]) is perceived as generally satisfactory by the ethnocultural communities, there is little evidence regarding the extent to which it (in combination with the regular school program) is in fact meeting the more general academic needs of minority students, needs that have not as yet been clearly articulated either by policy makers or by the ethnocultural communities themselves. However, if the academic needs of minority students in Ontario were found to be similar to those of some minority groups in the United States and Europe, then more L1-intensive forms of bilingual programs, which have met with success in other contexts, might be worth implementing on an initially small-scale experimental basis.

CONCLUSIONS

There is a wealth of experience with bilingual education in Canada as well as in many other countries. However, there is also a great diversity of bilingual learning situations, and findings are not directly generalizable from one context to another. Generalization and accurate prediction become possible only when the findings from different contexts can be accounted for by theoretical principles.

One theoretical principle, namely, the interdependence hypothesis, can account for the fact that, in virtually all bilingual programs, students can be instructed through the medium of a minority language at no long-term cost to their academic development in the majority language. This opens up the policy option of strongly promoting students' heritage languages in the schools without concern that this will impede students' general academic development in English.

For minority students who are experiencing or likely to experience academic difficulties, strong promotion of L1 proficiency has, in some cases, contributed to overcoming these difficulties. However, the pedagogical, community, and societal conditions under which bilingual or L1-only programs exert this type of impact have not as yet been sufficiently investigated to permit generalization of these findings to the Ontario context. Only a pilot scheme could accurately assess this potential applicability, as well as other important factors such as degree of teacher, community, and general public acceptance of this type of program option as a means of meeting academic goals. A pilot scheme would also permit the controversial issue of "ghettoization" to be investigated systematically on a case-study basis so that more informed discussion of the broader societal implications of alternative policy options would become possible.

A specific issue which has not been researched to any extent concerns the academic effects (either positive or negative) of add-on heritage language programs which are integrated into the regular school day. It might be objected that the research data deal only with bilingual programs and do not address the implications of taking time away from

the regular curriculum to teach the heritage language as a subject. This is clearly an issue that merits research investigation, although it appears unlikely that the concern is well-grounded. For example, few would suggest, and there is no evidence to this effect, that teaching core French as a second language detracts from students' overall achievement. As discussed earlier, the transfer of academic skills across languages is likely to be facilitated by any teaching of minority students' L1.

Clearly, further research is required to provide answers to questions of concern to Ontario policy makers, ethnocultural communities, and the general public which have not been sufficiently addressed in previous investigations. These issues include identification of the academic needs of different groups of minority students and the educational appropriateness and feasibility of program options designed to meet these needs. Ways of better utilizing the linguistic and cultural resources represented by heritage language instructors should also be investigated. The broader issue of how various heritage language program options might affect social cohesiveness can be empirically addressed only in the context of actually implementing a pilot program and carefully monitoring its social as well as educational impact.

The one finding that does emerge unambiguously from the present literature review is that minority students enrolled in heritage language bilingual programs progress academically <u>at least as well</u> as equivalent students enrolled in the regular school program. This finding is important to emphasize in view of the misconceptions of some educators and ethnic parents that such programs would impede the development of English academic skills.

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